GANN'S GREATEST SECRET

Dr. Hans Hannula, PhD, RSA, CTA

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prepared Feb. 6, 1992

No one person has spawned more market folklore than W. D. Gann. Every issue of every market magazine has ads for courses that in one way or another reveal a GANN SECRET. Most of these courses are standard Gann material, based on one of Gann's courses or some letters, or someone who knew Gann, etc. With everyone out selling all these secrets, how can there be any left?

Well, there is. Most people who are out selling Gann material (1) don't really understand it, and (2) haven't done their own homework on it. What you are about to read not only shows you one of Gann's Greatest Secrets, but tracks it to its source, analyses it, applies it, and extends it. When you are finished, you will have a whole new appreciation for Bill Gann, if not as a trader, as a student of the forces that move the markets.

I assume that by now you have read every book written by Gann, and maybe taken a Gann course or so. I will not cover any of Gann's work available elsewhere, such as Gann angles, squares, etc. I prefer to provide you something totally unique. That's how I add value.

This is a journey more than a report. You are to be involved, think, and participate. I will lead you down the path, show you a few things, and challenge your mind. I expect you to study carefully, think about what you read, and figure out how to integrate it into you own market activities. Now let us begin.

Gann's Master 20 Year Forecast Chart

Figure 1 is an admittedly poor copy of Gann's 20 Year Forecasting Chart. If you study it very carefully, you will see that it is a plot of the Dow Industrials, repeated every 20 years. It starts at 1901 and plots prices to 1920, then starts again at 1921 and plots to 1940, etc.

So what was Gann doing? He was simply looking for the Jupiter/Saturn cycle in stocks. Throughout his life, this is the one chart that Bill Gann always kept up to date. If you haven't learned yet that Bill Gann was an astrologer, you now know. Financial astrology has for scores of years, long before Gann's time, held that Jupiter was the Bull of Business, and Saturn the Bear.

So it is very logical for Mr. Gann to be trying to find the JS (Jupiter/Saturn) cycle in stocks. If one starts a chart when J and S are in a line on the same side of the Sun (called a conjunction), as they were in 1901, and plots prices as Jupiter moves around and again catches up with the slower moving Saturn, you have plotted price versus one JS "synodic" (coming together) cycle. If you repeat this for five or more cycles, and then "stack" the

FIGURE 1.

- 3 -
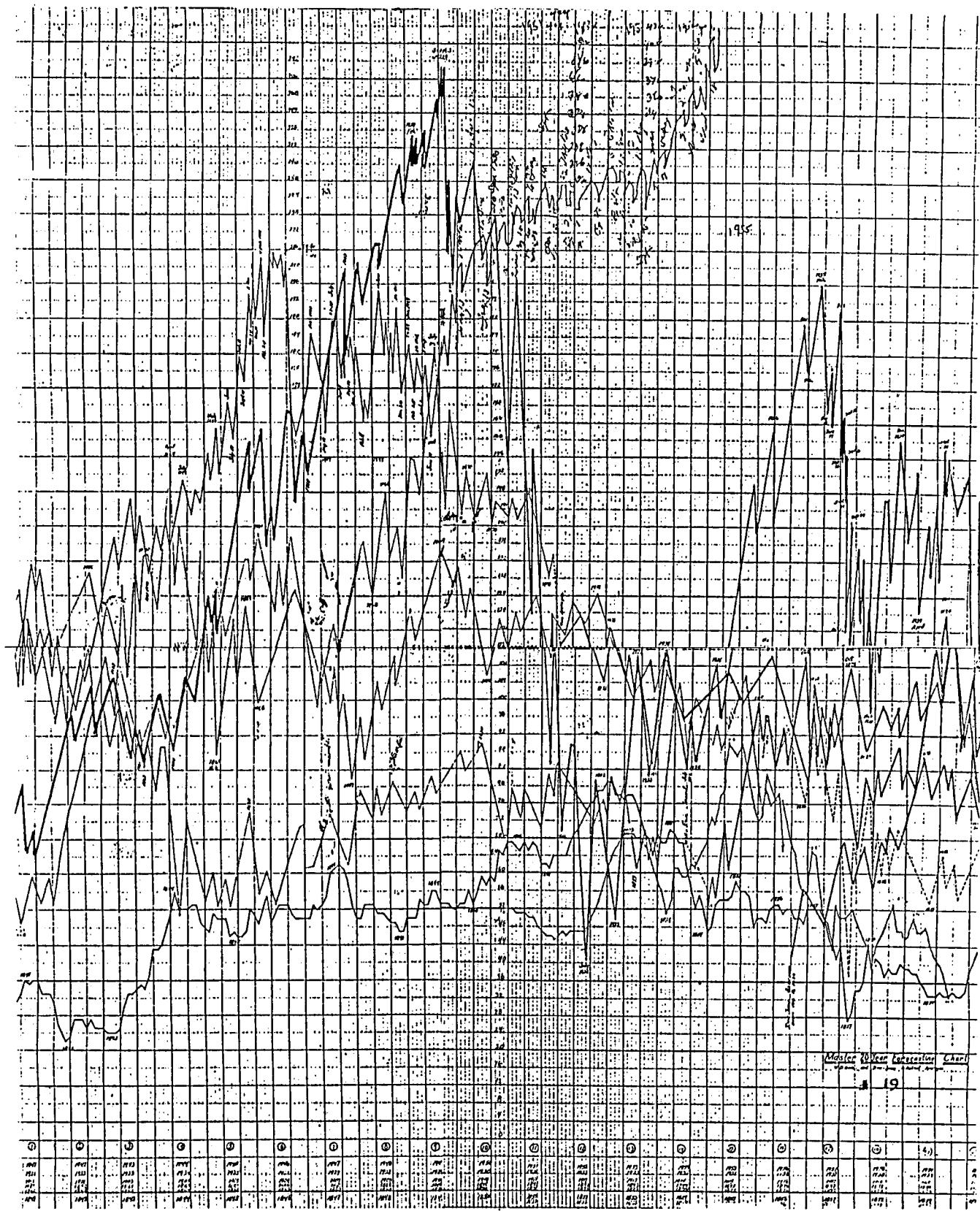
charts, or overlay them on the same piece of paper, any consistant pattern should be visible. If you are mathematically inclined, you could average the prices for each corresponding month in each cycle, and use that to predict the next cycle. This is a very ancient cycle extraction technique. It relies on the assumption that effects due to causes other than the cycle under study will fall above and below the average value of the cycle and thus cancel out.

Why 20 years? The average JS synodic cycle is 7253.4668 days long, or 19.858564 years. But because of the eccentricity of the planetary orbits, the value can be approximated as exactly 20 years.

Gann's Astrological Wheels

If you've searched far enough in your pursuit of Gann knowledge, you have probably come across either Figure 1 or Figure 2. Both are Gann astrological wheels. They start on the right at zero degrees on March 21st, the spring equinox, and move counter clockwise around through the "circle of the year" of 360 degrees.

Note that the top is the summer solstice, the left the fall equinox, and the bottom the winter solstice. Every 15 degrees is marked. This is based on the naturally occurring harmonic divisions of the circle into halves, quarters, thirds, sixths, eights, twelveths, and twenty-fourths. Gann observed from any years of study that tops and bottoms in stock and commodity prices fell on one of these multiple of fifteen degree lines.

He further observed that at the same times, certain planets were making major configurations. These are marked with the astrological symbols and the year. If you use a magnifying glass, you can read many of these notes. You can also read in the center of the chart, the astrological symbols for the twelve divisions of the zodiac. Take a few minutes now to study these charts with a magnifying glass, and see if you can identify some of the planetary configurations shown. A reference set of astrological symbols is on the next page.

☉	Sun
☽	Moon
☿	Mercury
♀	Venus
♂	Mars
♃	Jupiter
♄	Saturn
♅	Uranus
♆	Neptune
♇	Pluto
☊	Moon's Node

♈	Aries
♉	Taurus
♊	Gemini
♋	Cancer
♌	Leo
♍	Virgo
♎	Libra
♏	Scorpio
♐	Sagittarius
♑	Capricorn
♒	Aquarius
♓	Pisces

☌	0°	conjunction
⌄	30°	semisextile
∠	45°	semisquare
✶	60°	sextile
□	90°	square
△	120°	trine
⬛	135°	sesquisquare
⊼	150°	quincunx
☍	180°	opposition

FIGURE 3

-6-

FIGURE 2.

-7-
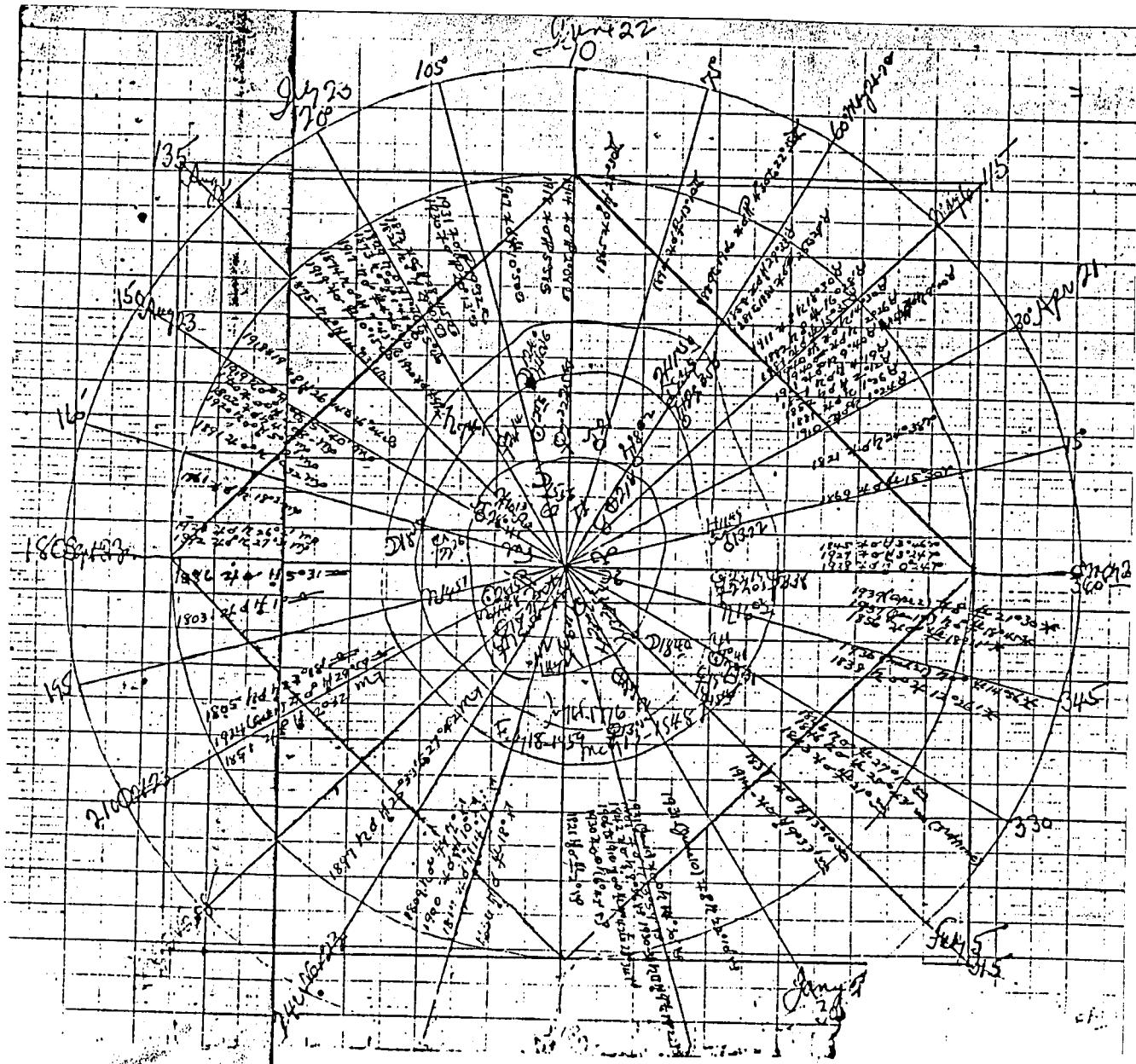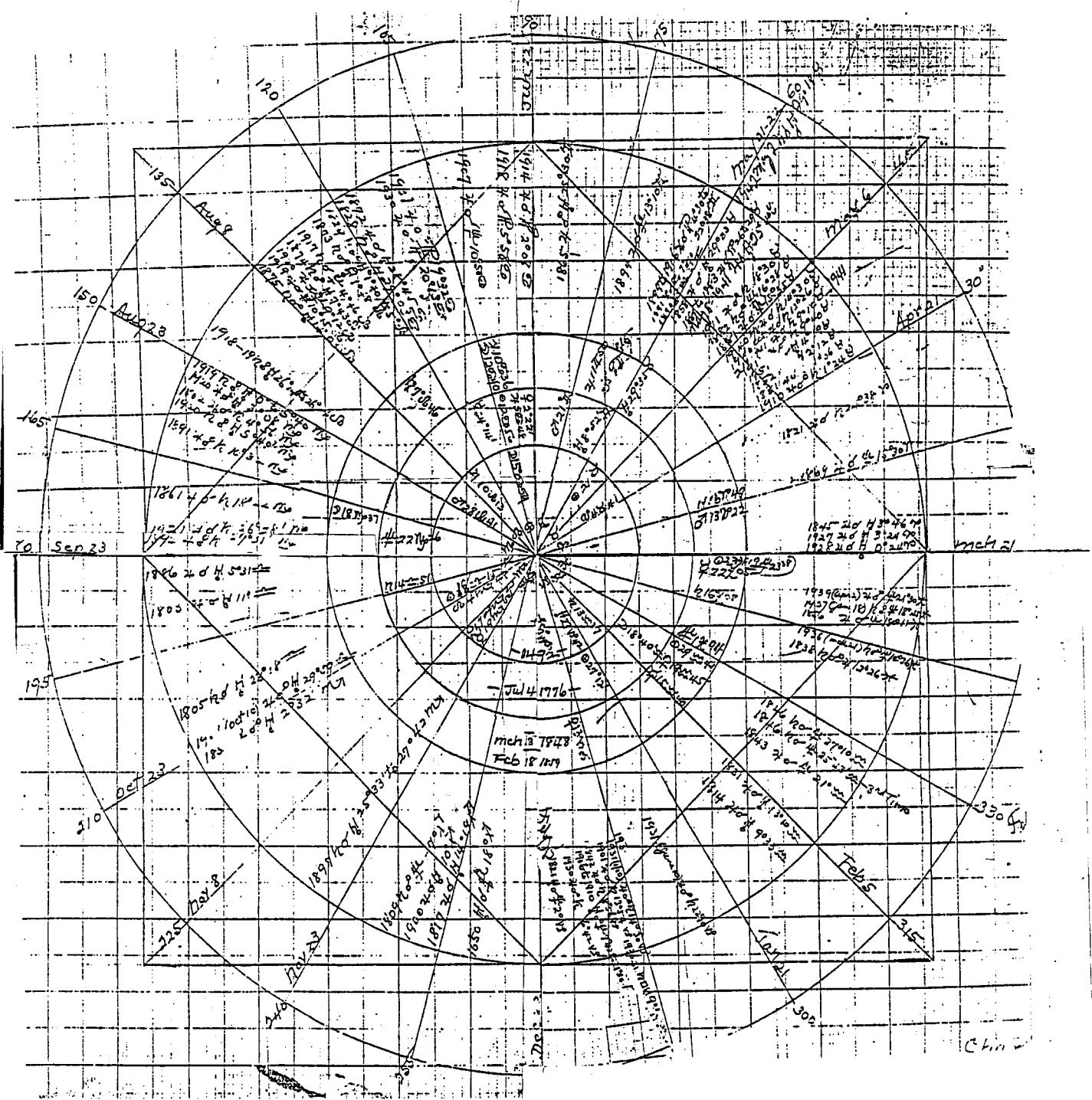
Now that you've looked a little at Gann's wheels, you should at least believe that Gann used astrology in his trading. If you looked very carefully, you also noted a lot of JS configurations marked. These are usually the opposition (same side of sun) or conjunction (opposite side of the sun). You also may have noted that there are five concentric circles. These are representative of Mercury, Venus, Earth, Jupiter, and Saturn.

At this point it's time to do your own investigation of the JS cycle. Figures 4 throuh 8 are twenty year plots of the Dow industrials. Along the top are the heliocentric (sun centered) positions of the Juptiter/Saturn cycle. The numbers are the number of degrees from conjunction, starting at 0, through the opposition at 180 degrees, back to the conjunction at 360 degrees. Of course, 360 degrees is then end of one cycle, and is the zero degree point of the next cycle.

Natural cycles tend to break into subparts of the cycle. For example, if a cycle divides into four swings and starts at a low, it would have a low at 0 degrees, a high at 90 degrees, a low at 180 degrees, a high at 270 degrees, and a low back at 360 or 0 degrees. A division into twelve swings, the turns are every 30 degrees. In a division by eight, the turns are every 45 degrees.

Now take a pencil and lightly sketch in your version of the JS cycle in Figures 4 through 8. Put a dot below the Dow for a low at that degree, and a dot above the Dow for a high. Then sketch lines to connect the dots to see if you can visualize the JS cycle. Figure 4 has started an example.
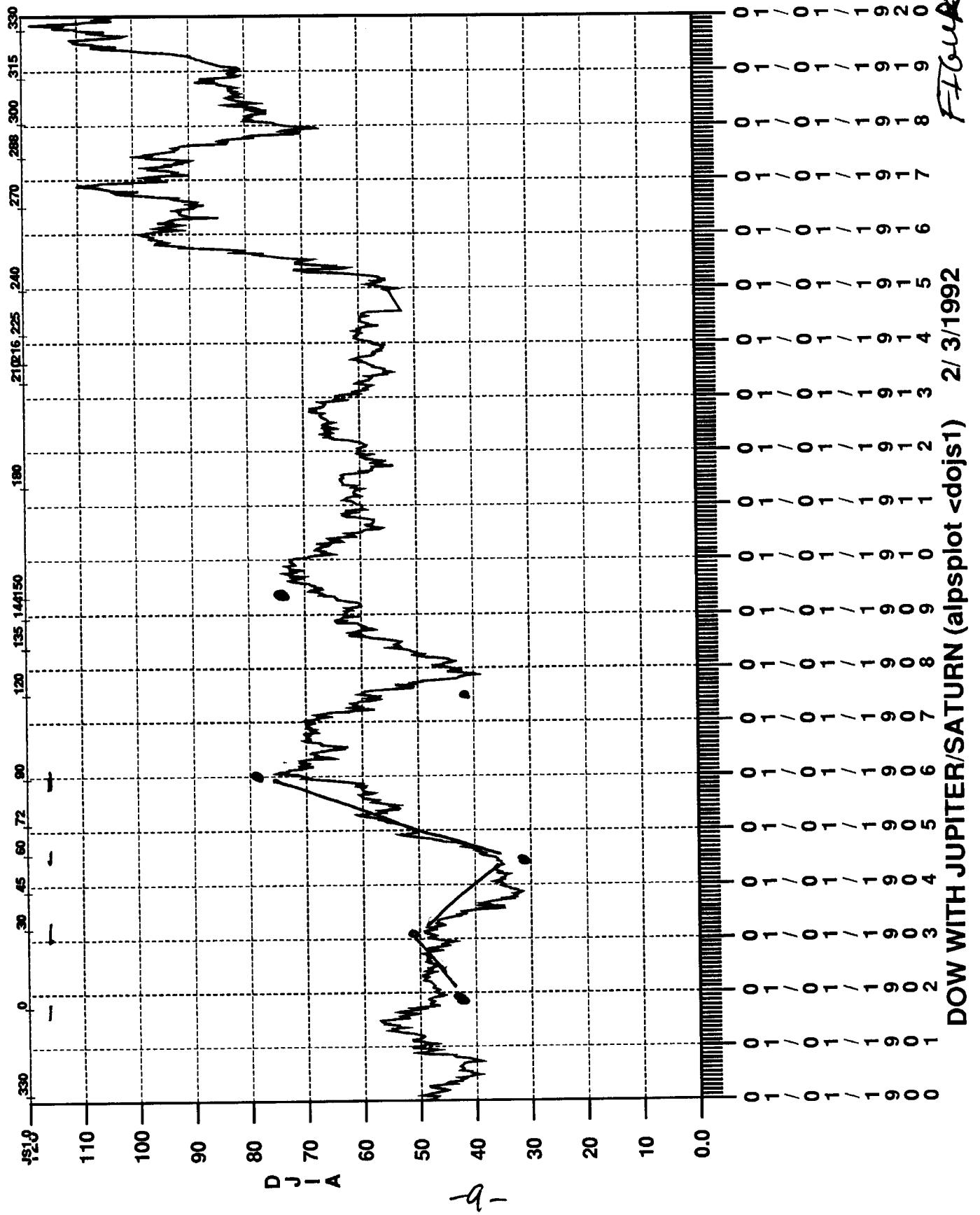
DOW WITH JUPITER/SATURN (alpsplot <dojs1)   2/3/1992

FIGURE 4

-a-

DJI120.0

110

100

90

D
J — 80
I
A   70

60

50

40

30

20

10

0.0

DOW WITH JUPITER/SATURN (alpsplot <dojs2)   2/3/1992

FIGURE 5

JS18 350 300 250 200 150 100 50 0.0

D J-A

-10-

DOW WITH JUPITER/SATURN (alpsplot <dojs3)   2/3/1992

FIGURE 6
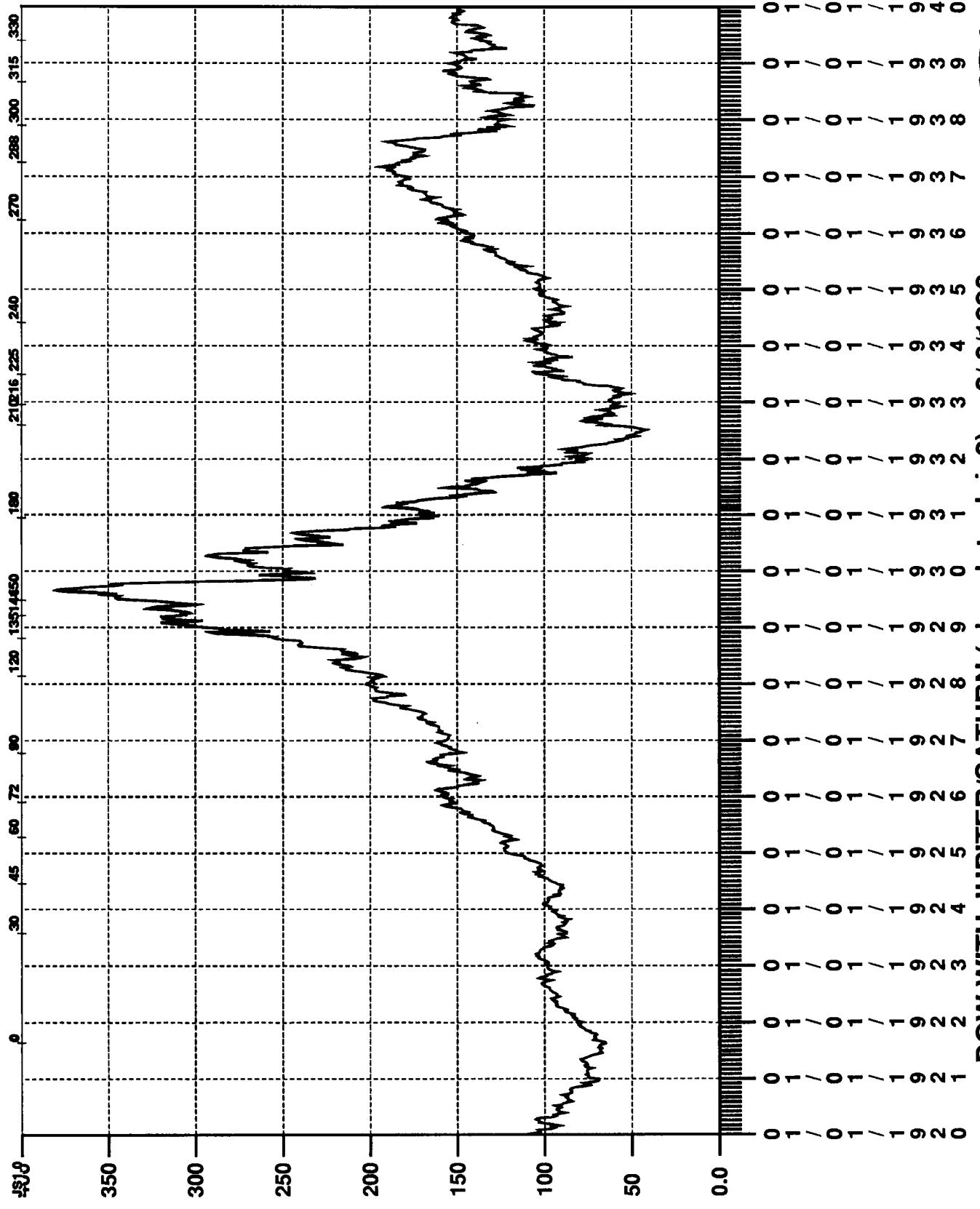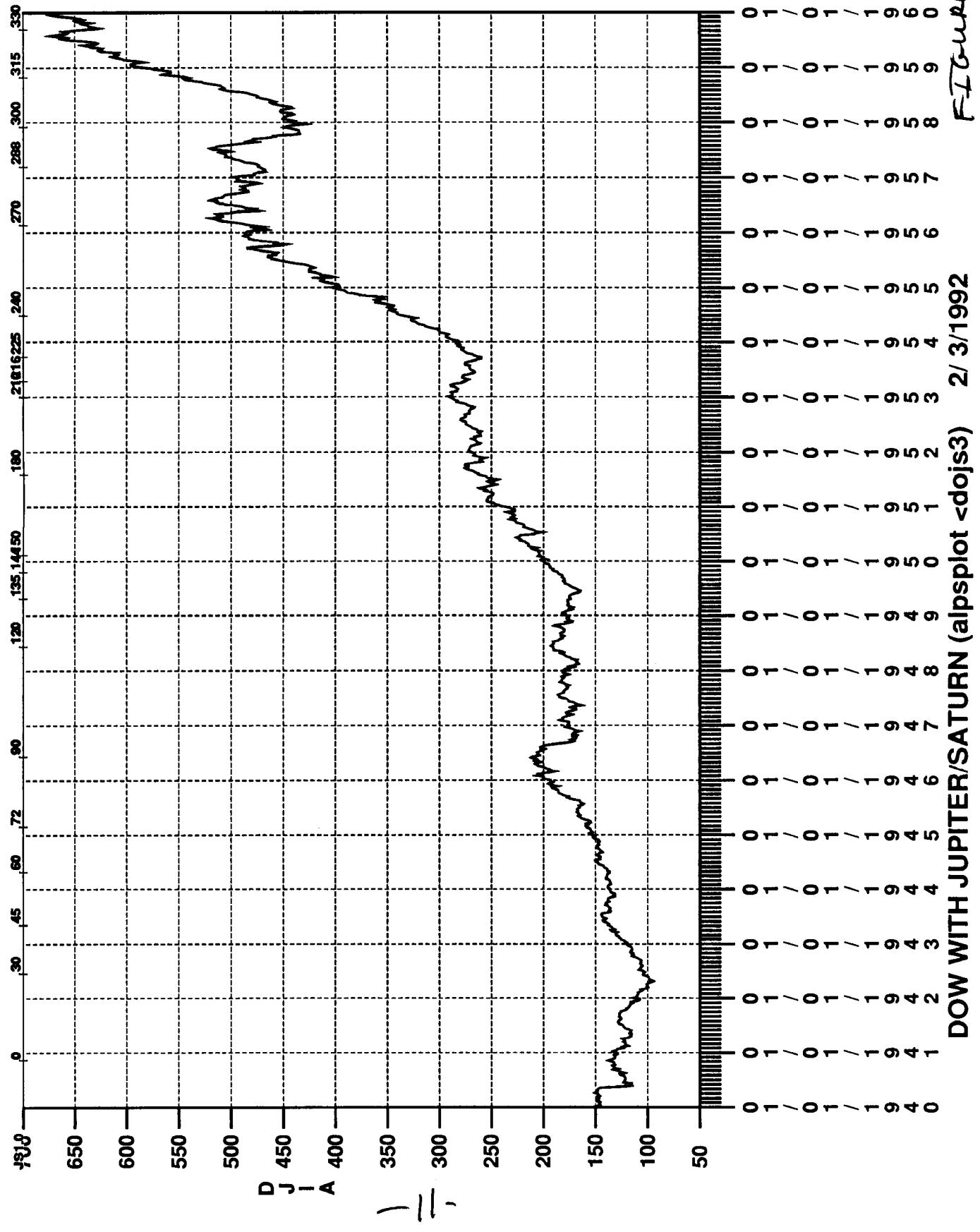
DOW WITH JUPITER/SATURN (alpsplot <dojs4)   2/3/1992   Figure 7

-12-

Figure 8.
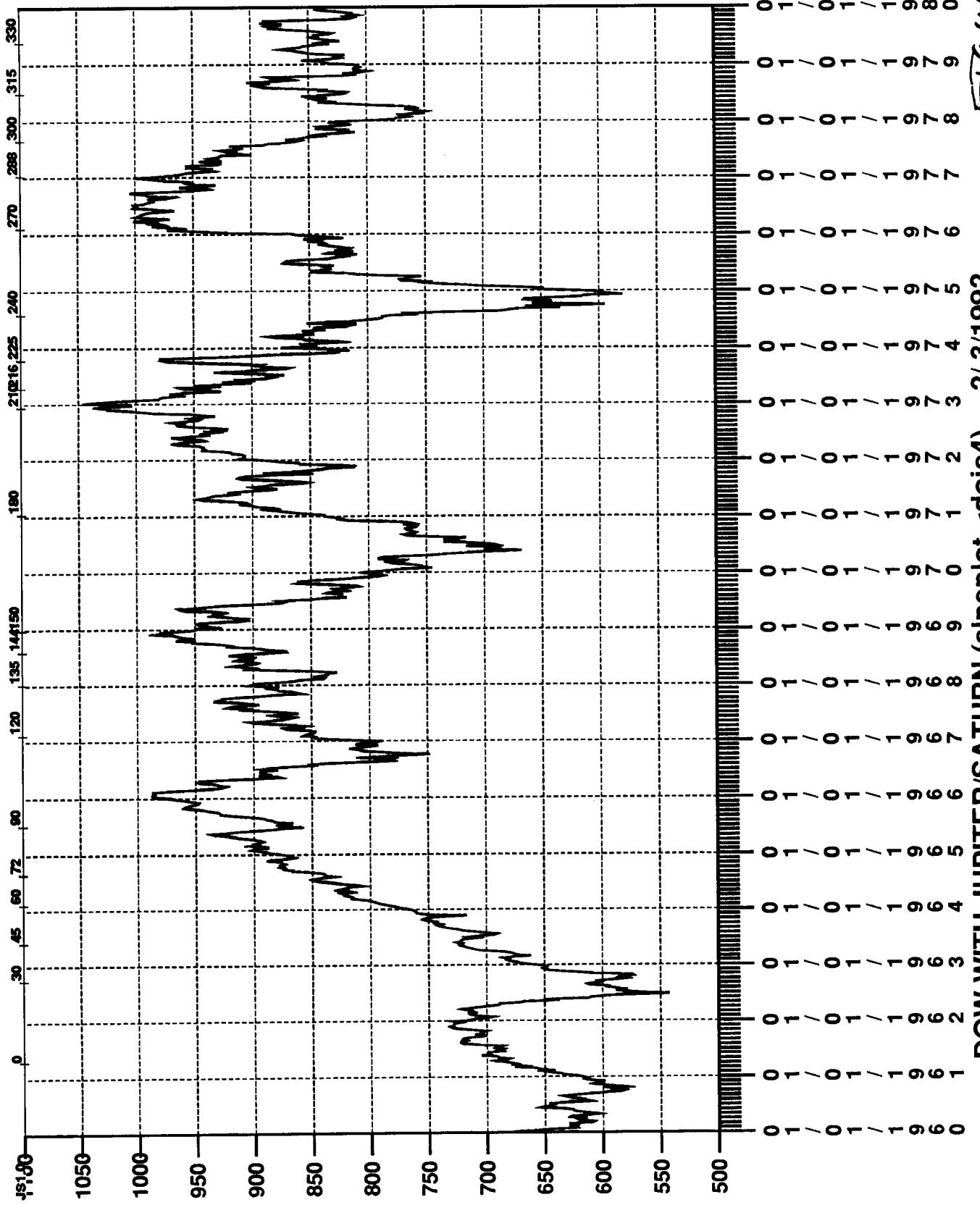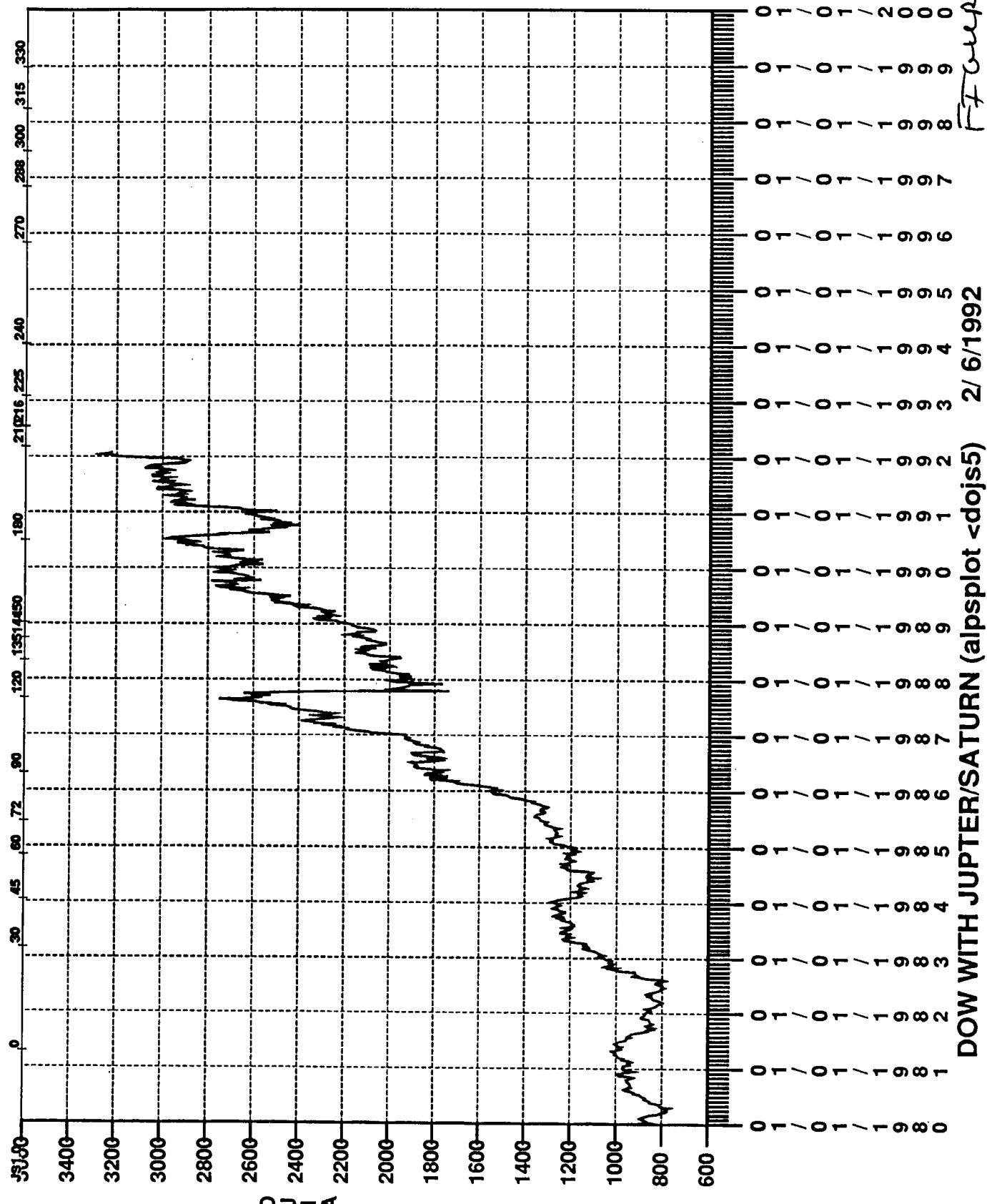
DOW WITH JUPTER/SATURN (alpsplot <dojs5)   2/ 6/1992

As you just found out, much of the time the JS cycle seems to turn on 30 degree multiples, but not always. In particular, from 1980 on, the swings seem to have changed. Zero could be a high, 30 a low, 45, a high, 60 a low, and then the swing runs to 120, the 1987 top. One fifty is probably a low, and 180 a high, but 210 also seems a high. Yet, from this exercise, you can see that the JS cycle is clearly strong in the Dow.

Many people have gotten this far in tracking down Gann's secrets. And it is very valuable knowledge. However, there is more.

Gann's Professor

I've been told that Gann was very private about his office. He absolutely forbid anyone from entering it. He wanted to protect his secrets. But one document he kept in his safe.

That document was a manuscript by Professor Weston of Washington, D. C. It was written in 1921 (part 1) and 1923 (part 2), four to six years before Gann published his *Tunnel Thru the Air, Or Looking Back From 1940. Tunnel Thru the Air* contains, in coded form, Gann's explanation of how to use planetary cycles to trade stocks and commodities. He told his own family that it was all they ever needed to learn his market secrets.

Many Gann students have labored very long and hard (yes, me, too) to decode Gann's writing. Gann loved to write in the abstract style of the Biblical mystics, whom he admired. Much of what is written in the Bible is information about planetary cycles. It is hidden in census counts, symbolic imagery, and heavily coded to escape notice of the casual reader. While one can dig out this material, it takes time, an ephemeris, and a lot of work.

Gann had it much easier. What you are about to read is the paper Gann kept in his safe. Take your time and read it carefully. *It's one of the best papers ever written on the market.* After you read it, I'll point out some interesting things about it.

F O R E C A S T I N G

THE NEW YORK STOCK MARKET

Being a Treatise on the

Geometrical or Chart System of Forecasting
In Which is Explained the Principles of the
Art, and, in this Lesson No. 1, Giving
a Demonstration With the Price
Curve of Potatoes in U. S.

By Prof. Weston
Washington, D. C. 1921

The New York Stock Exchange was first incorporated

on May 17, 1792, 8:52 a.m., at New York City, as an

association of stock brokers. In 1817 the plan of

association was remodeled and a set of new rules adopt-

ed. On February 21, 1820, the code of rules was revis-

ed and a reorganization was established which has not

been greatly changed up to the present time. By the

year 1858 the volume of business had attained import-

ant proportions and the daily trading was fairly con-

tinuous for the most active issues. From 1873 to pre-

sent date the New York Stock Market records may be con-

sidered as fairly reflecting the general business condi-

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tion of the country, and from that year onward are to be taken as truly representative of the changes in values in the world of finance and speculation.

The real record, of course, embraces the transactions in a large number of issue, but for practical use the prices of 20 railroad stocks and 10 industrials have been averaged, daily, for a number of years. These are available at this time (1921) for more than fifty years. These averages are generally of the closing bid on the several issues and constitute a series of daily values which we call the stock market record, or trend.

There is usually a distinction made between the railroad stocks averages and the averages of the industrials, but in reality they move just about the same. However, in this work the railroad stocks averages are taken, as best representing the movement over a considerable term of years.

This record of average prices is usually represented in terms of dollars and cents, that is, the values are carried to the second place of decimals of the dollar. When charted according to the usual and conventional mode of charting all such trends, a geometrical

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curve is the result, that is to say, the charted values of the New York Stock Market price record have the appearance of an irregular "curve," as expressed in the language of that art which deals largely with "curves," namely, geometry.

On account of special references that are to be made in this thesis regarding geometrical curves it may be well here to remark that in mathematics all lines are "curves," with the single exception of straight lines. But since it is practically impossible to draw a straight line of any appreciable length, then in actual demonstration no appreciable lines but curved lines can exist.

This is equivalent to saying that any graphic representation by linear plotting must always be a "curve." As a consequence, then, of the definition of this scientific term, the Stock Market trend as of record may justly be called a "curve," indeed, it is a geometrical curve, the same as any other linear representation.

But the Stock Market trend is the representing curve of a natural phenomena, the phenomena of alternately rising and lowering prices on important proper-

ties distributed throughout the country. This statement that price change on properties is natural phenomena may seem questionable to many readers, but a careful study of the subject has fully shown the facts to be fairly clear and well substantiated. Statisticians generally recognize phenomena in these changes, because it is quite obvious that the problem really involves fundamental considerations that can only be treated as natural phenomena.

If no other thing were known about the Stock market but its trend we should be compelled to suspect this movement as being a natural phenomena upon the more grounds of its universal character. How can a world-wide action take place daily for half a century or more without taking on all the characteristics of a genuine natural phenomena? Many thousands of absolutely independent traders make numerous commitments each day on this market and it would obviously be the height of absurdity to suppose that they act by deliberative convention, in unison, or by organic function. The influence of a few pools is always off-set by others having an opposition interest, so that their action is equal to nothing in the

way of bringing on irregularity. As a matter of fact it has been shown time after time that nearly every stock market pool or combine fails in attaining any desired end. So well known is this fact that only in rare instances and under some specially favorable circumstances are pools operated even in a single stock. It is not practical, and of late years is rarely attempted.

The few pools that really do operate never make the smallest attempt at irregularity, simply because that would be instantly checked, to their detriment. They work a few small, common schemes of questionable utility and wind up about where they started.

Legislative tinkering and the wabble produced by the political tricksters are sometimes disturbing factors, but they are generally transitory, and as they occur at intervals only, they may be neglected without much error.

The banking organization has an influence, but so far it has been distributed over long periods of time in such a gradual way that its equation can not well be added in, although it is fairly clear that at times this factor can produce a notable irregularity.

Within the last century it has been shown by several authors that nearly all natural phenomena known to mankind on this earth passes through well defined cycles of change in its duration of manifestation. These cycles, proven to be essential qualities inherent in the character of all phenomena of nature, were shown by Fourier and demonstrated by Schuster, to be made up of a series of harmonic curves, or waves. For example, the tides are computed by a sequence of harmonic values. That is, wave motion and tidal motion in water is governed by a law called the law of gravitation in such a way that the liquid moves along no other lines but those represented by the natural sines, as tabulated in works on geometry. The mathematicians express the case in a form that they call an "equation," and when several components are to be taken account of they write several equations in a certain form called a "sequence." Wherever the geometrical sines are used as an important part of such equations and sequences the writers now call the expression a "Fourier sequence," because Fourier, a French mathematician of the last century, wrote up an exhaustive study of this form of expression. All late authorities, I be-

lieve, now concede that the Fourier sequences are of

prime value wherever any subject may be mathematically

treated as a natural phenomena. That is, it is now

understood in science that the sine sequences are the

true mathematical fundamentals wherever any natural

phenomena of a cyclical character may be represented al-

gebracally. The nature of these sequences is largely

treated upon by numerous works on mathematics, and to

these the reader is referred for further information

on the subject, but just here it may not be out of

place to give the following example of the common alge-

braical form of expression a Fourier sequence:

$$y = \cos (at + A) + B \cos (bt + B) + C \cos (ct + C) \ldots$$

This general form will be used throughout these

lessons, but usually the numerical values will be sub-

stituted for some of the symbolical letters, thus rend-

ering the sense more complete.

Now, since the Stock Market curve is a natural and

a cyclical phenomena, it may, as a consequence, be re-

solved into an algebraical series, or sequence of harmon-

ics, and the algebraical expression for this sequence of

harmonics would evidently become the equation of the

stock market trend for any and all dates.

Note this statement with some care, as it is the fundamental doctrine upon which our system is based. We resolve the records of the past into a series of harmonics and then, by carrying the series into future dates, forecast the market curve. The foundation of the whole system may be briefly stated as follows:

The plotted record of the New York Stock Market is a geometrical curve that represents the manifestation of natural phenomena. When subjected to the harmonic analysis this curve yields a sequence of harmonic components that may be used for purposes of solving the trend, to a close approximation, for future dates.

The problem presents absolutely no difficulties beyond the common labor and pains inseparable from all calculations of the kind. We have nothing to do but merely analyze the market's curve of experience as we have it on record, thus taking out its harmonic components, fix their epochs and ranges, the same as is done with any kind of an experience curve, after which the conventional algebraical expressions for their equations are written, in the usual way, and we are then

ready for market forecasting. Solve the equations for
future dates and the thing is done.

To proceed in orderly fashion along these lines, ob-
serving always strict mathematical and scientific methods,
it will, perhaps, be well for the student to first se-
cure a fair understanding of the kind of mathematical rea-
soning we shall be required to use in this work.

It may be premised, at the beginning, that a cycle
connotes, always, a duration time, because there cannot
be a real cycle that is not recurrent at regular inter-
vals of time. It is a series of recurring events, in
time, but it is, also a series in a certain or fixed
length of time.

This definition of course at once gives us the geo-
metrical grounds for the graphic representation. It is
the similitude of a circle. It goes all around once and
then exactly repeats, time after time, forever. But for
the sake of rendering the numerous repetitions available
for diagraming purposes and also for utility in adding to-
gether the various cycles, the geometrical scholars and
authors have conveniently chosen a handy device for
transforming the time and range of the natural circle in-

to the natural sine curves. This device is called the

equation of the natural sines, and algebraically it is

expressed as:

$$y \doteq \cos x$$

This is merely and simply the linear equation of

the circle, as may be seen from the following:

Fig. 1
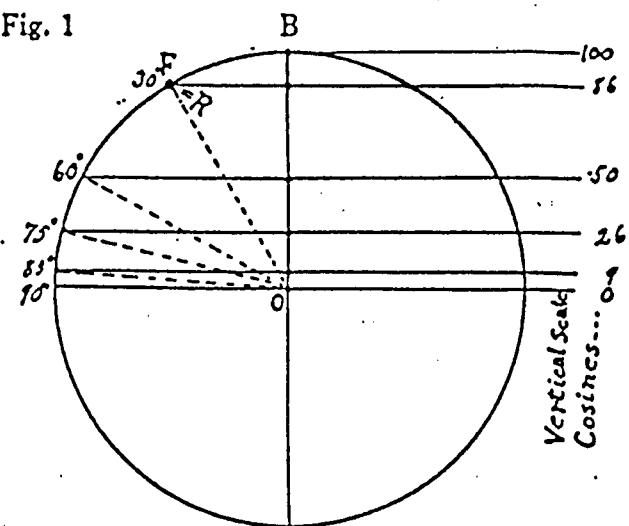
We take a circle and draw in the vertical diameter.
The letter O will represent the center and R is a moving
point on the periphery of the circle. The motion of R
is uniform, that is, as a radius vector it describes
equal areas in equal times, but the arc described, if
referred to a vertical scale, consequently differs pro-
portionally in units of time. Suppose we begin measur-
ing arcs of the circle at B as an initial or epoch point,
that is, a point having the algebraical value of O, and
suppose our mover, R, begins a chosen motion at F, then
it is plain that the angle BOF will represent the angle
of the time from epoch when R is at that position. If
R goes on completely around the circle it is also clear
that the diameter of the circle will become the measure
of the amplitude of oscillation, and the time of once go-
ing around becomes the periodic time, or the length of
the cycle in units of time. The ratio of BR to the cir-
cumference of the circle, taken at any time, becomes
the phase of the motion for the time. If degrees are
counted on the verticle diameter, always level with R,
then those degrees become units of motion exactly in
the same ratio to the angle of motion as the natural

sines are to the orbit of motion.

It is the common practice in geometry to refer angular motion and time to a linear representation, or diagram, for the sake of the much greater facility for study afforded by such a device. This is easily accomplished by the use of the cosines, which are the equivalent of the angular time units. This fact is well known in Geometry and is clearly illustrated by the foregoing diagram (Fig. 1). This angular motion may be expressed algebraically by the simple equation--

$$y = \cos x$$

Or, we may be a little more elaborate and put--

$$y = \cos x \ (nt + e)$$

Where y is the graphic abscissa and the angular value in time, x is the graphic ordinate and the radius of the circle in terms of the natural sines, while n is the unit angle that R describes in time, t, and e is the epoch, or date.

Generally we do not use the symbol y, but use A, B, C, and so on, and as a rule we write in the numerical evaluations of n and e, thus rendering the equations much more expressive.

Where there are several components to be combined
we use what is called a sequence (a Fourier sequence)
usually of the form

$$y = A -a \cos (nt\mathbin{\dagger}e)$$
$$\overline{\dagger} B -b \cos (nt\mathbin{\dagger}e)$$
$$\dagger C -c \cos (nt\mathbin{\dagger}e) \text{ etc., etc., etc.}$$

Now this series of harmonics is merely a series of
sine curves, or rather, cosine curves, because we elect
to begin all our work herein at the maximums, in order
to preserve some uniformity and avoid the confusion of
using various sorts of starting points. Any one of the
single components in this series might be graphically
represented by itself as follows:

Figure 2. The Linear Graph, or Chart, of the Natural Sines.
Illustrating the relation existing between orbital or cycli-
cal motion and linear representation. Also showing how the
natural sine harmonics are derived. (Instead of sines we
use their complement, the cosines, in all our work, be-
cause we chose to fit epochs to maximums,) The curve here
is y equals cos x.
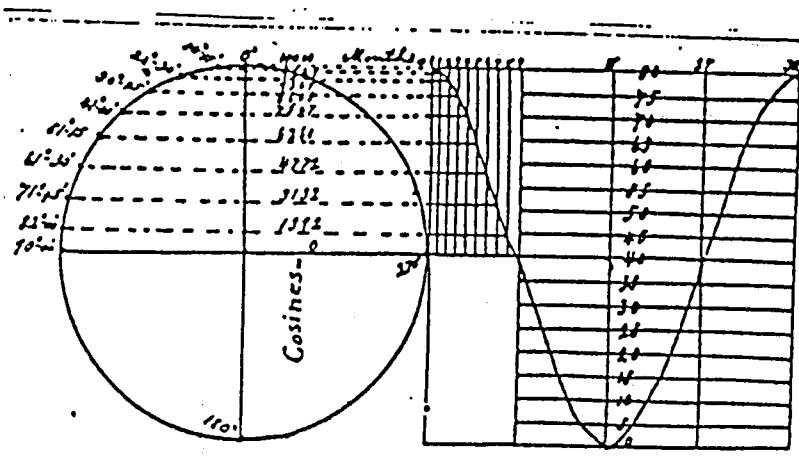
In this graph, Fig 2, illustrating the cosines, the unit of time is supposed to be a calendar month and its angular value about 10 15 , because the equation is

$$y \doteq B - B \cos (nt + \theta) \ 10 \ 15$$

and consequently there are 35 terms in it, for according to solution 360 ÷ 35 ≐ 10 15. This is the equation of one of the harmonics of the Potato curve, later to be dealt with. Here it is to be observed that the diagram illustrates the relation between orbital motion in time and the natural cosines, thus, for the Potato curve, we plot

y≐ Terms	Angle	x≐ Cosines
0...........	0 00...........	.10000
1..........	10 15...........	. 9842
2..........	20 30...........	. 9367
3..........	30 45...........	. 8594
4..........	41 00...........	·7547
5..........	51 15...........	. 6260
6..........	61 30...........	. 4772
7..........	71 45...........	. 3132
8..........	82 00...........	. 1392
9..........	90 00...........	0

As is rulable in geometry this solves for the first quadrant, then for the second we reverse the order of x and proceed; for third we reverse back but change the algebraic sign in the equation; reverse lastly for fourth.

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We may now take a ruler and by drawing in quadrille squares through this diagram to point off the units that are to be used in both abscissa and ordinate, make y any value we choose and also x any value we choose. Thus:
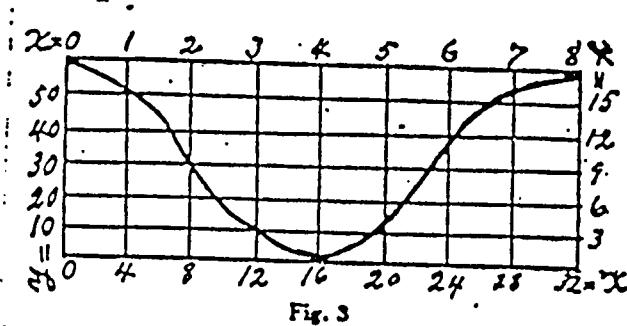
Fig. 3

By merely evaluating the time units in x and the scale of amplitude in y, we secure any sort of figures that will suit our purpose, yet at the same time never in the smallest degree disturbing the position of the sine curve.

Perhaps an example showing the general mode of analysis and synthesis that will be adopted for use in this thesis will be more clearly grasped by the student than the abstract rules for solving tests with periodograms or least square examinations. For this purpose let us examine the price curve of potatoes as shown by the records in the United States. The figures and the diagram as below are the average market prices of potatoes in the United States during the month of December in the years as given, and are derived from the reports of the Department of Agriculture:

(Note; see chart on page following)
The Experience Curve of Potato Prices.

The upper curve represents the average price of potatoes in the United States for the month of December from the year 1866 to 1915, being the interim between two military disturbances. Beneath are the 2.934 and 20.556 harmonics.

30
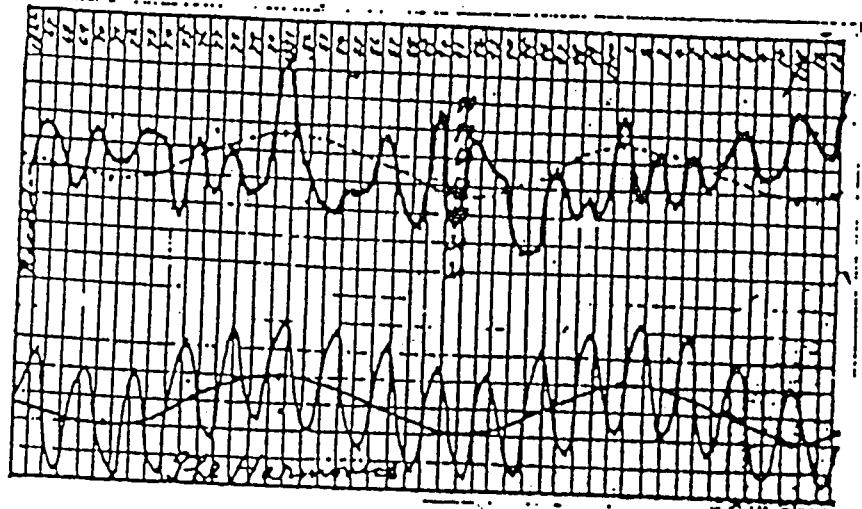
The highly technical methods of applying periodo-
grams of the amplitude of oscillation for the time units,
and testing the deviations from the harmonics by the
least squares may all be used if the student cares to
take the pains to try them on the Potato curve or any

other kind of a curve, but in actual practice the method here recommended and used is the common old method of "cut-and-try." If the investigator can not find any cycles by the simple cut-and-try plan then it is exceedingly probable he would never find any useful ones by means of the periodograms or the least squares. We do not want any cycles unless they are useful ones, and if they are useful they will almost certainly be plain enough in the records to admit of being picked up after a few trials with the cut-and-try plan.

From what has been said in the foregoing paragraphs, we reason that in the Potato curve of record, which we here have before us for discussion, there is a series of cycles, graphically representable in terms of the natural sines by sequence combination. This assumption is essential in our theory and must be our guide in all chosen modes of preceedure. We assume this curve must be a compound natural sine curve.

For convenience and for uniformity in all our work we begin by looking along at the maximum points in the Potato curve, as diagramed, with a view to noting the

distribution of the tops in the general field of vision. By a little cut-and-try study we find these tops come out somewhere near 3 years apart. Also, we easily see by drawing a dotted line through in such a way as to represent the general averages in 3-year periods, that there must be a long-swing component of near 20 years.

This simple method of mere inspection, keeping in mind our fundamental theories, advances us at once to the point of determining very closely the two principal components of the Potato curve,

There is a top at the year 1867 and one at 1911, an interval of 44 years. In this interval there are 15 tops, then we reason that 44 divided by 15 equals 2.934, that is, the mean periodic time of the supposed 3 year cycle is really about 2.934 years, instead of exactly 3.

We now assume that there is a component of 2.934 years in the Potato curve, with probable epoch beginning at December, 1867. Supposing there is also a cycle of about 20 years, we may upon common theory assume that this cycle is the 7th harmonic of the 2.934-year cycle, so then 2.934 yrs X 7 = 20.538 yrs, and these

are the cycles sought.

By this very simple, yet strictly mathematical and scientific process we are able to determine very closely the exact length of two harmonics in the Potato curve and fix their epochs, for we see quite plainly that, the cosines in the supposed 20-year cycle must osculate about in December of the years 1881 and 1901.

At this stage of the investigation we become prepared to test our assumptions based upon pure theory, namely the theory of geometrical cycles being useful in the art of prescience. Accordingly, we draw a sine curve of 20.5 years, because, as just explained, 20.5 years, or 246 months would be the length of the seventh harmonic curve of the before-determined 2.934 year cycle. This is in accord, also, with the common doctrine that the harmonics are usually multiples of each other, according to the showing of Fourier and Schuster. We take this harmonic as equal to 246 months and December 1881 as the time of its epoch. Now the seventh part of 20.5 will be about 35.14, therefore we shall assume that the length of the shorter period is about 35 months and 4 days, with its epoch to begin at December of the

year 1867.

In the usual way we now superimpose the short per-iodic curve upon that of the longer period and upon dia-graming the result get the Potato harmonio, as shown in the diagram below the record of potato prices. See Fig. 4.

It is now quite plain that our work so far has been fruitful. No doubt can well be entertained after compar-ing this theoretical curve with the record, as seen in the diagram, that it will serve fairly well as a fore-casting curve. It is so good, in our estimation, that we may proceed to write the equations for it and adopt them as our working equations of the Potato Curve to be used in making conjectural extensions into future dates.

Keeping in mind the demonstration regarding cycles, as in preceding paragraphs, we equate the circle of 360 degrees with our cycle of 35.14 months, by simply saying

$$360 \div 35.14 = 10.244$$

That is, each unit of time, in our cycle, (a calen-dar month) is equal to 10.244 degrees on the periphery of a circle. Now in a circle there are four quadrants, according to geometrical notation, and in taking out the cosine values from a table of cosines (found in

many mathematical works) we, for our purpose, begin at the top..

All this is made very clear in Fig. 2, where it is seen that the circle is divided into 35.14 units of 10 15 each and each unit in our problem being a calendar month. For each month, beginning with December 1867, we take out from a table of cosines the value given every 10 15 and tabulate it under the names of the calendar months and years from December 1867 to any future date that we may choose to extend it to.

In a like manner we get out the cosine values for the 246-months component, the degree unit being determined, by saying 360 ÷ 246 = 1.46, which is 1 28, and we therefore go along each 1 28 in the tables taking out the cosines for each calendar month from December 1881, both forward and back through the years as far as we may wish to compute the curve.

It must now be obvious to the student that if this is done for both components and for all calendar months in all years, we would have two cosine values for each of the months, and as the plus sign in the equation calls for addition we perform it, the sum being the

Potato Curve and its equation being

$$Y = A - A \cos \left(nt \div \text{Dec } 1881\right) \ 1 \ 28$$
$$\div B - B \cos \left(nt \div \text{Dec } 1867\right) \ 10 \ 15$$

Now the reader has before him the entire process, quite complete and fairly well explained, and it is believed that any person of ordinary capacity may easily understand and use it. The system is called the "geometric" system of conjecturing. It has been found to be of the very greatest value, and as it is based upon truly scientific principles, every step rigorously mathematical and all conclusions absolutely unaffected by any kind of exterior influence, it may be relied upon with the full confidence always warrantable in a correct mathematical result.

FORECASTING THE STOCK MARKET

We now come down to the business before us, namely, the work of forecasting the New York Stock Market by means of the geometric system treated of in the foregoing pages.

We first submit the Stock Market trend as of record to an examination under the common methods of harmonic

analysis, similar to what was done with the Potato Curve, the only difference being that greater pains, greater detail and greater diversity of methods were really used in order to secure the results here to be fully explained and demonstrated.

End of Part 1

If the student has read the foregoing pages with reasonable care, and has fairly grasped their import, he may be considered as sufficiently advanced in the art of prescience to appreciate the grand and wonderful advantages that might be secured through the possession of the equations for solving the Stock Market curve in terms of the natural harmonics.

FINANCIAL LESSON NO. 2 gives these equations, as worked out by the Professor, quite as fully as can be desired. The market record itself is given in figures for a term of years; also diagramed; full explanations of how the cycles are derived and how their epochs are fixed; complete equations are given and explained; general methods to be used in a manner similar to those exemplified in deriving the Potato curve. In fine, this

study given in Lesson No. 2 is to be considered as the delivery of the system of Stock Market forecasting, as regards the long swing components.

T H E   T E N - Y E A R   C Y C L E

IN STOCK MARKET PRICES

As was remarked in the preceding pages, we are now down to the business of stock market forecasting, and, to gain this end, in the light of what has been said, we shall expect to find and demonstrate useful harmonic cycles in the stock market records. As was indicated, also, a greater diversity of method may be used in this case, the foregoing example having been designedly reduced to the utmost simplicity for the sake of easy comprehension. But now we shall proceed to look for the common geometric harmonics in the stock market averages, and, furthermore, we shall inquire into the reason why they are there, that is, the causes of them, and the natural laws governing the phenomena.

Upon diagraming the stock market average prices for each month in the year from 1873 to 1923, 50 years of record, embracing 600 months, we find, at almost the

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. first glance, there is a 10-year cycle in it.

I should remark just here, however, that this cycle was recognized by numerous investigators many years ago. Perhaps the first writer to call particular attention to market cycles with a view to using them in forecasting, was Charles Dow (died in 1902) in some of his editorials while publishing a New York financial newspaper about in 1901. The cycle theory was often mentioned before, but it appears that Charles Dow, Mr. Gibson, Mr. Brown and a few diletante writers on finance had brought it forward in their writing at various times near the close of the last century. These writers treated the 10-year cycle as a mere curiosity and as a singular circumstance supporting some fond theory that they were endeavoring to explain. Not one of them made the smallest attempt to apply mathematical reasoning, or, indeed, any other kind of reasoning, to the case, being fully satisfied merely to mention the obvious circumstance and then pass on to things that seemed to them of greater importance.

It would probably become irksome to the reader if I labored through numerous pages of details in regard to

the various studies and researches that I carried out during about 15 years of work on the problem, therefore it seems best to briefly remark that all my research tended strongly to indicate that the stock market average price curve rises and falls IN ACCORD WITH PLANETARY INFLUENCE.

While this idea might come to a few as a mild shock, it is in no way new. Mr. Carrington, Prof. Jevons and other writers many years ago mentioned it, but as they did not possess the modern records that we now have, they were unable to determine the price values equating with the planetary co-ordinates.

As a matter of fact, no mathematician before the year 1915 could have successfully analyzed the market curve by use of the planetary co-ordinates. But the excellent record we now have, from 1873 to 1923, lends itself readily to an effective determination of the harmonic values.

We now know what causes the principal long-swing movement in stocks. It is the varying distances between the two great planetary masse called JUPITER AND SATURN.

A text-book discussion of common astronomy could not be given space here, but as the planets Jupiter and

Saturn are the only ones dealt with in this thesis, we may briefly mention the following regarding them. These planets revolve around the Sun nearly in the ecliptic plane, in the same direction as Earth, Moon and all other planets. Jupiter has a periodic time of 11.86223 tropical years, while the periodic time of Saturn is 29.45772 tropical years. As a consequence these planets form heliocentric conjunctions in an average period of 19.853 years, that is, in 7251 days, 3 hours, 23 minutes, 24 seconds and 17 thirds. Between an opposition and a conjunction the mean time is a little less than 10 years, or is about 9.929 years.

By a carefully conducted research I found that the influence flowing from Jupiter and Saturn is nearly the same at oppositions as at conjunctions, the cycle being an irregular harmonic of ten calendar years. A rather singular thing was developed during the research. It seems that the influx has an annual governance. That is, to all appearane, each year in the cycle has its individual conformity predetermined for it as one unit in the cycle. No parts of units (years) are recognized. Each calendar year fits in without any overlapping of frac-

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tional parts. On this account some of the years of record repeat, while others skip one exact unit's place, i. e., skip a year. For example it was found that the years 1874 and 1889 each not only end a cycle but they also each begin the next one as well. But 1881 and 1901 are odd interpolations, the true end of the cycles occuring before them and after skipping them commence regular again, leaving these years entirely out. The law governing this peculiar irregularity is not perfectly known, but is is undoubtedly connected with the Earth's motion, that is, the irregularity arises from apparent retrograde motion due to Earth's position.

The question may be asked, "Do the other planets have any appreciable effects on stock market prices?" The answer is yes, but the law governing their action is not as yet well enough known to warrant their use in forecasting the long-swing movement in prices. They are used, under empiric rules, in conjecturing daily change, but the methods are not as yet perfected.

Making due allowance, according to above explanation, for the years 1874, 1881, 1889 and 1901, we have the years of the five cycles from 1873 to 1923 placed in order as shown by this table No. 1:

4 3

The equations in the common form may be written as
follows, with the understanding that solution for each is
for only one-quarter of the circle:

20 mo. A - a $=$ cos 200 ($\frac{1}{5}$ t Nov. 1st and 5th yrs) 9
28 mo. B - b $=$ cos 200 ($\frac{1}{7}$ t July 3rd and 7th yrs) 6 26.
10 mo. C - c $=$ cos 70 ($\frac{1}{5}$ t Nov. 9th year) 18 .
14 mo. D - d $=$ cos 70 ($\frac{1}{7}$ t Sept. of 10th year) 12 53.

The 20th harmonic begins in November of the 1st and
5th years of the cycle. The 28-months begins in July of
the 3rd and 7th years. The 10-months begins in November
of 9th year. The 14-months begins September of the 10th
year of the cycle.

For diagraming purposes (as represented by the line
of small stars in Diagram B) the following evaluations
were adopted for each month in the several cycles, the
figures being approximately the cosine terms as computed
for the unit angle of each equation as above:

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The Ten-Year Cycle of the New York Stock Market

Diagram B
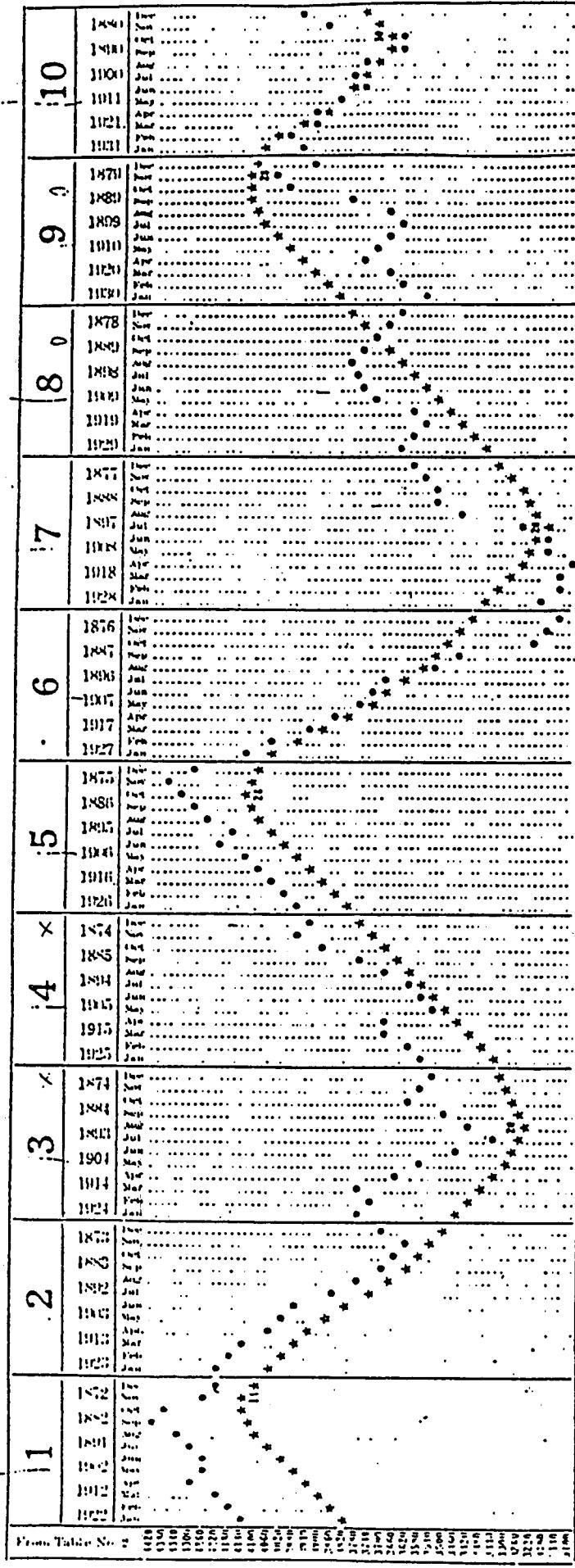
This chart gives the values as in Table No. 2, represented by the small round dots under each month. This curve, made by the round dots, is the true forecast curve for the years in the cycles as in Table No. 1, these same years being also here given in heading.

L. H. Weston.

The curve in this chart made up of small stars is intended to approximately represent the harmonic of the Ten-Year Cycle. This harmonic is fully described in this booklet, and here it serves to indicate the regularity of the swings of 14, 20, 28 and 10 months.

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The Smoothed Forecast Curve of Stock Market Prices

Diagram C

This diagram gives the forecast curve smoothed out and with   L. H. Weston.   It is believed that this smoothed curve is very near the mean the theoretical Venusian Secondary superimposed upon it.   movement of the stock market averages.

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CURVE	CURVE	CURVE	CURVE
	200		
	179		
	197		
	194		
	170		
	185		
	178		
	170		
2	162		
5	153		
11	143		
19	133		
30	122		
42	111		
5?	100		70
68	89		68
84	78		65
100	67		60
116	57	0	54
131	47	3	48
145	38	7	40
158	30	14	32
170	22	24	24
181	15	40	17
189	10	55	11
1?5	6	64	6
198	3	68	2
250	0	70	0

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THE SECONDARY CYCLE

If we closely examine the composite, or forecast *see at end of discu*

curve as made by the round dots in Diagram B, we at once

perceive that somewhere around every 7 or 8 months there

is a secondary maximum. Beginning with the first year

of the cycle we would place the first of these maxima at

March and next one in October; next one in May of the sec-

ond year; again in January and September of the third
year of the 10-year cycle, and so on, so on, in the fol-
lowing order, the figures showing how many months there
are between amxima:

1	2	3	4	5	6	7	8	9	10
7 MAR 7 OCT	7 MAY	8 SEP 8 APL	7 APR 7 NOV	6 MAY 6 NOV	7 JUNE	7 JAN 8 SEPT	9 JUNE	10 APR	10 FEB 6 AUG

It will at once be seen that there are 16 maxima
of the Secondary in the 120 months of the cycle, the aver-
age being 7.5 months between maxima, which is about 225
days. Now the periodic time of the planet Venus is 224.7
days, just exactly the mean time between these maxima in
the stock market composite record. Do not fail to grasp

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the full significance of the wonderful fact that the orbital period of Venus is the same length in days as the 18th harmonic of the ten-year cycle. This indicates that our curve is caused by Venus, Jupiter and Saturn and will continue so to be caused to eternity.

These Secondary maxima are a little closer together when the prices of stocks are high and they appear to be farther apart when prices are low, as well as during the transition period of the 8th and 9th year of the Primary cycle. The length of the Secondary varies between 6 and ten months. For a little over 3 months prices decline and then rise 4 or 5 months. The above tabulation (page 20) shows the months in the 10-year cycle when the maxima occur, the figure attached to each month in the table showing the length of the Secondary in that portion of the Primary.

With this data, together with Diagram B, the student should be able to get a very close line on stock market prices for any future year up to 1952, or longer.

The System

Strictly, this method of forecasting is properly

called the "geometrical cycle system," because the funda-
mental essential of it is a cycle having geometrical har-
monic regularity. But we find that certain planets, to
all appearance, actually cause the phenomena, and we
therefore assume that the action is really due to plane-
tary modifications of telluric influx reacting upon the
brain substance in the human organism. This was known to
the ancient Egyptians, but we of the present day use
slightly different notation and process in handling the
facts.

For the purpose in hand, that is, in order to make
up a conjecture as to the long-swing curve of the New
York Stock Market, we first double the monthly mean
price record together five folds corresponding in time
with five meeting of Jupiter with Saturn, by conjunction
and opposition. This composite gives us the curve to be
used in forecasting. The influence from Venus is then ·
assumed as manifesting in the form of a 16th harmonic
superimposed upon the Jupiter-Saturn 10-year curve.
This gives us the long-swing forecast. Other planets
are not used in this curve. By a different treatment
they are made to yield a result that is handled only

for special purposes in a higher development of prognostic art than can be treated upon here. But I may remark that the student may go on to any degree of nicety with the principles described.

Those students who wish to go exhaustively into the subject should have a good command of astrology, astromomy and mathematics. However, the main principles are easy to grasp, and Diagram A, should put the ideas well within reach of all. That diagram is designed to show the curve of influence produced on stock market prices by the varying angular distances of Jupiter from conjunction or opposition with Saturn. It will be seen that at 0 years and 0, which is supposed to represent the time of geocentric conjunction and opposition of the planets, the dotted curve, which is our composite price of stock in the 10-year cycle, same as per Table 2 and Diagram B, starts a little below the mean circle; then late in year 1 when distance is about 18 between the planets it goes to maximum height; then drops low in middle of year 3 at 54 ; rises to late in year 5 or 90 ; drops soon to a little late in the 7th year at 126 ; rises slowly to past the 9th year or 162 ; lastly, comes to a little below the

Diagram A—The Influence of Jupiter and Saturn.
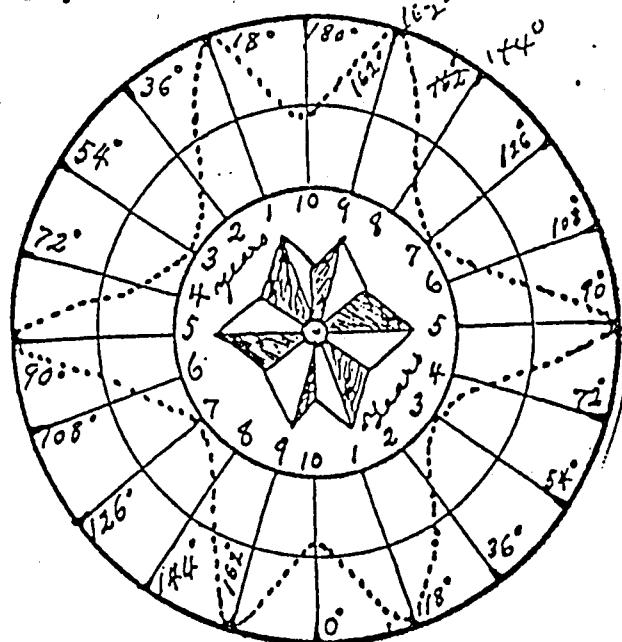
mean again at 10 years, 180 , same as at beginning. Then

at 180 another 10-year cycle starts and repeats this

movement, and so on to eternity.

It is thus seen, by the dotted curve in this diagram

that Jupiter and Saturn cayse maximum and minimum prices

in the stock market when their geocentric angular dis-

tances between each other are about as follows:

Max.	Min.
18	54
90	126
162	180 and 0

This dotted curve shows positively that the plane-

tary influence is what we call harmonic, meaning a wave-

like motion, fixed in angular position like the crystals

of a snow flake (hydrogen at low temperature) with 2 min-

or axis that join the major at 72 , as illustrated by

the central part of this diagram.

CONCLUSION

In these lessons, as delivered in this small book-
let, the student should find the absolute foundation
principles of true prognostic art as applied to financial
conjecturing. Of course, the last word has not been said
here. A very much higher development may be possible,
but if the student adopts the general system here explain-
ed and uses it as the basis for his financial studies, he
should soon become an adept market forecaster in the geo-
metrical chart school, the only worthy school of finan-
cial conjecturing.

Undoubtedly twenty years of independent study would
not advance a student as far as these short lessons have
advanced him in a single reading of them. In a moment
they open to him a great and wonderful new field of
study wherein he may advance immediately, with full and
abiding confidence, feeling as secure and safe in every
step as the nature of such speculation can be expected
to afford.

It is to be remembered that each student who re-
ceives these lessons is under a strict pledge of secrecy.

This is to protect all concerned. We are keeping the system as secret as we can, for if it became a matter of common knowledge much advantage would be lost to those now possessing it. So far the secret is confined to the rather small circle of the author's subscribers, and the hope is that this circle will widen only through this narrow channel.

Points About Weston's Paper

First, this is clearly the foundation of Gann's use of the 10 year cycle, and its multiples. Second, this is historically a fairly early use of Fourier sequences, and far more mathematical than just using financial astrology. This is no surprise, since it is well known that Gann was a very good mathematician. It is also a source of many of his ideas that market movements follow geometric rules.

It is also quite interesting that Weston actually proposed two different versions of the ten year pattern. The first is his computation, using 50 years of data, of a series composed of 20 , 28, 10, and 14 month components, to which he adds a Venus term. In this system he cites use of heliocentric positions. We'll call this first method "Weston's Curve".

A most interesting point made in this method is Weston's discovery that the planetary cycles tend to slip to synchronize with the earth's annual cycle. I discovered this in my own work, and was sure it was an original discovery. So much for that vanity!

The second method I call "Weston's Snowflake." In it he proposes a sequence of turning points in the JS cycle that divides it into 10 irregular parts. Interestingly, Weston claims that this is a geocentric system. We'll show in a moment that it was not. But this "false lead" may have been intended for those whom Weston feared would learn his secret.

Gann obviously make good use of Weston's methods. Perhaps we can, too. So let's take a look at how well Weston's systems have stood the test of time.

A Century Of Weston's Curve

To study how well Weston's curve forecast the Dow, I simply entered his curve from his Figure C as computer data, and plotted it under the Dow. This is shown in Figures 9 through 13. As you study them, keep in mind that the curve was "curve fit" up through 1923, so the match will look great. After that, it is all forecast. Also note the sections marked where the forecast is upside down, or inverted. My research has shown that all planetary cycles do invert. But even when they do, they often give good change in trend indications.

Fig 9
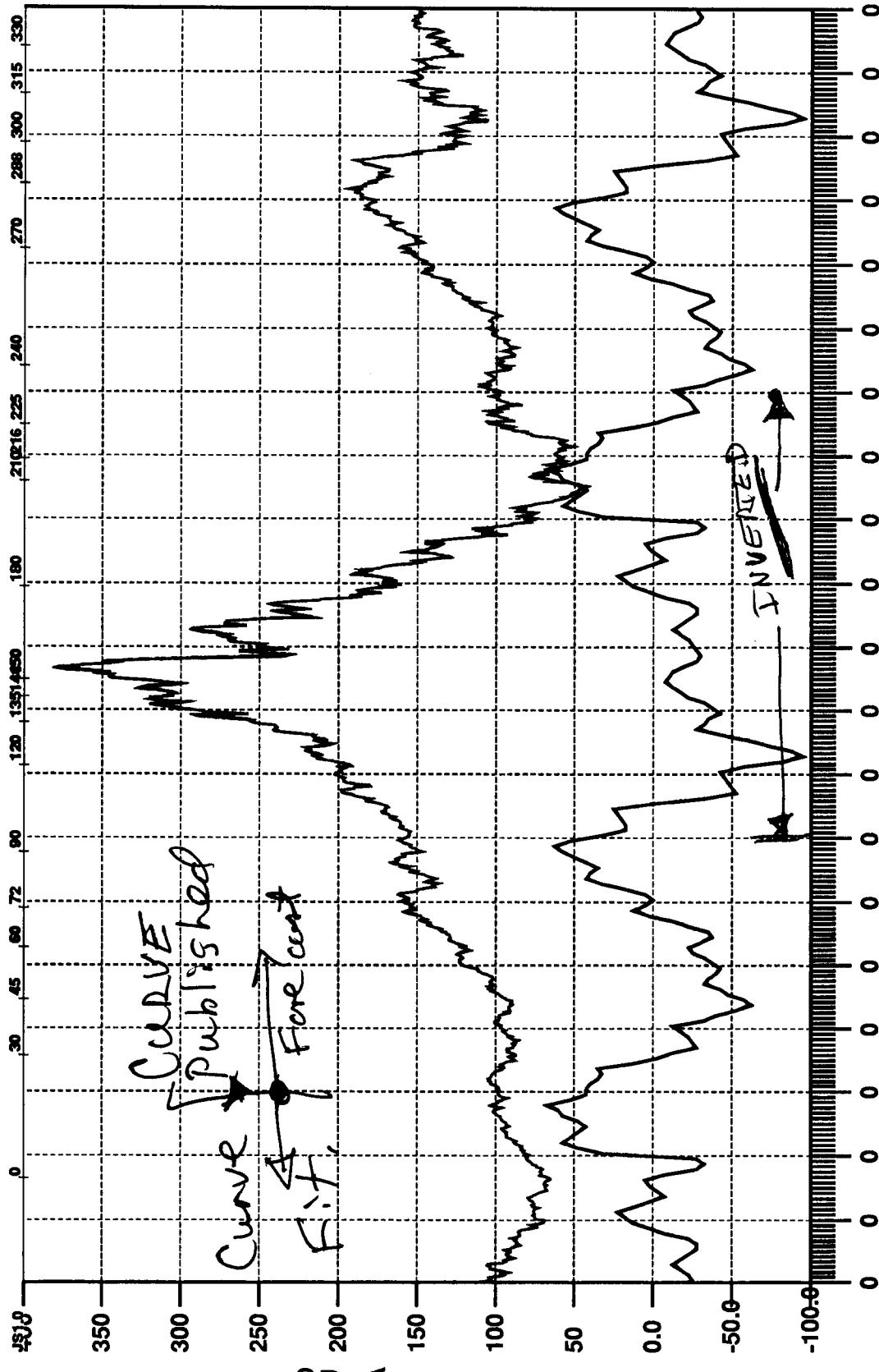
DOW WITH JUPITER/SATURN AND WESTON'S CURVE (alpsplot <dojs1) 2/6/1992

DOW WITH JUPITER/SATURN AND WESTON'S CURVE (alpsplot <dojs2)   2/5/1992

Fig 10

DOW WITH JUPITER/SATURN AND WESTON'S CURVE (alpsplot <dojs3)   2/5/1992

Fig 11
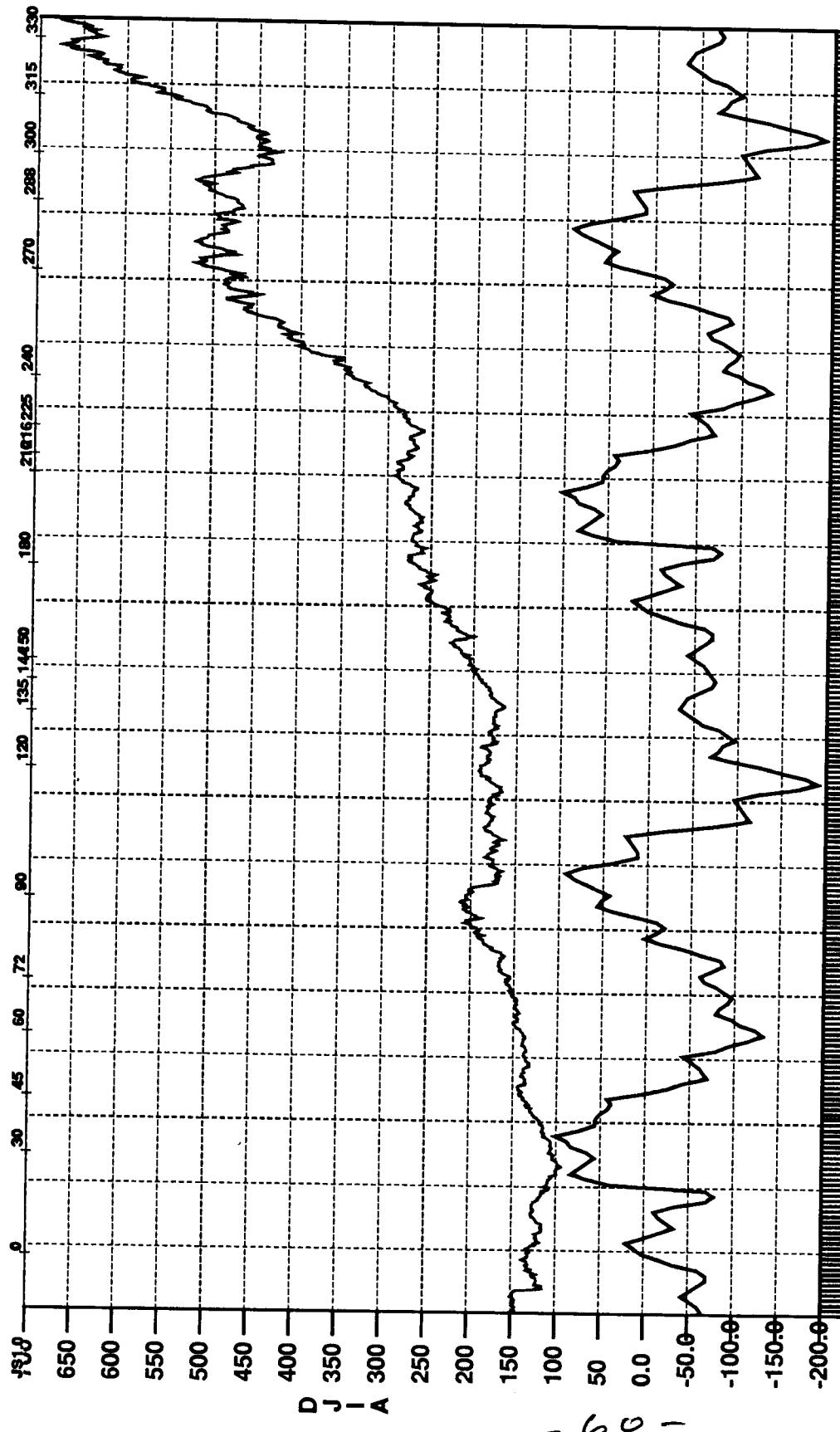
Fig 12
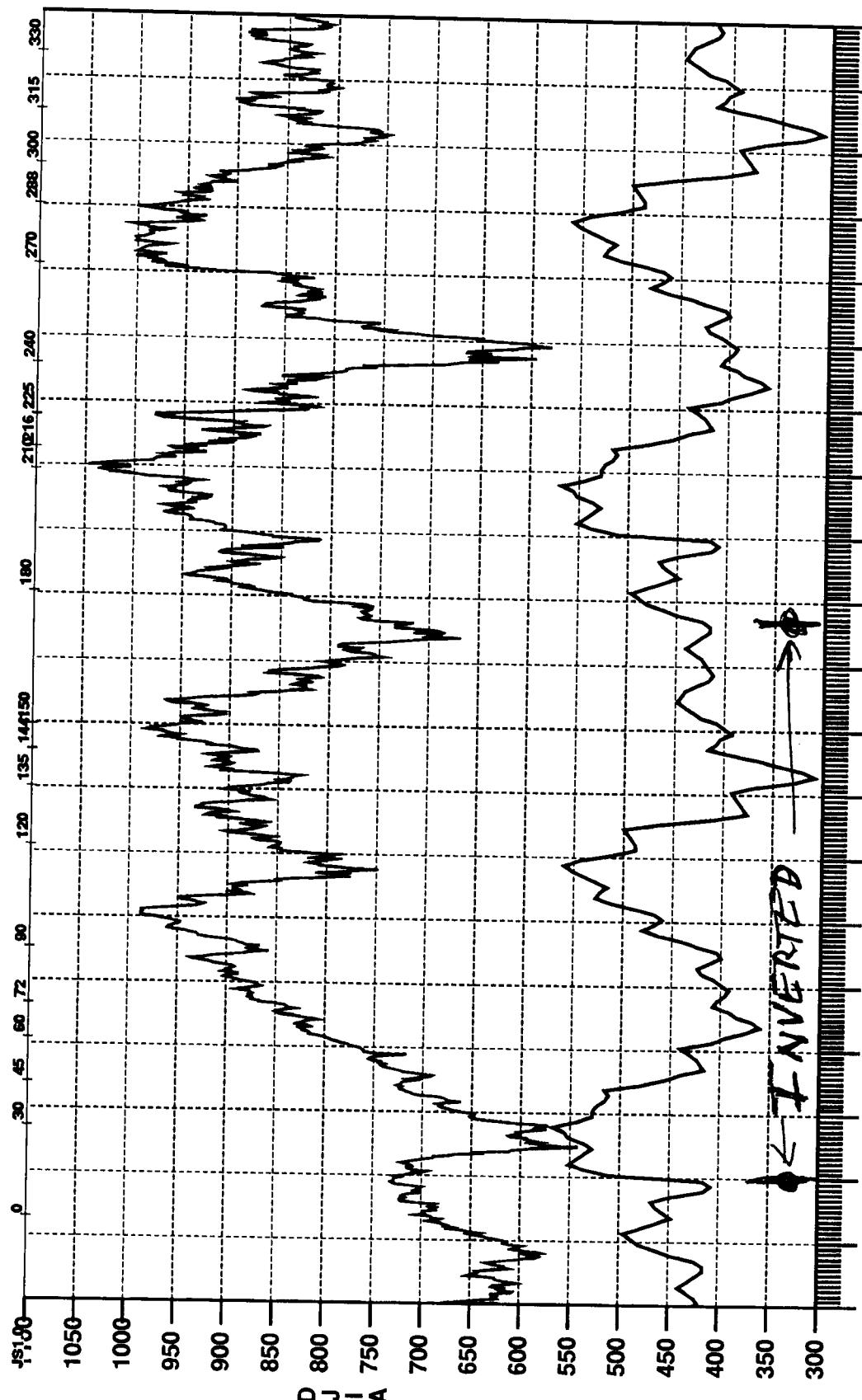
DOW WITH JUPITER/SATURN AND WESTON'S CURVE (alpsplot <dojs4)   2/5/1992

← INVERTED

Fig. 13

DOW WITH JUPITER/SATURN AND WESTON'S CURVE (alpsplot <dojs5)   2/6/1992
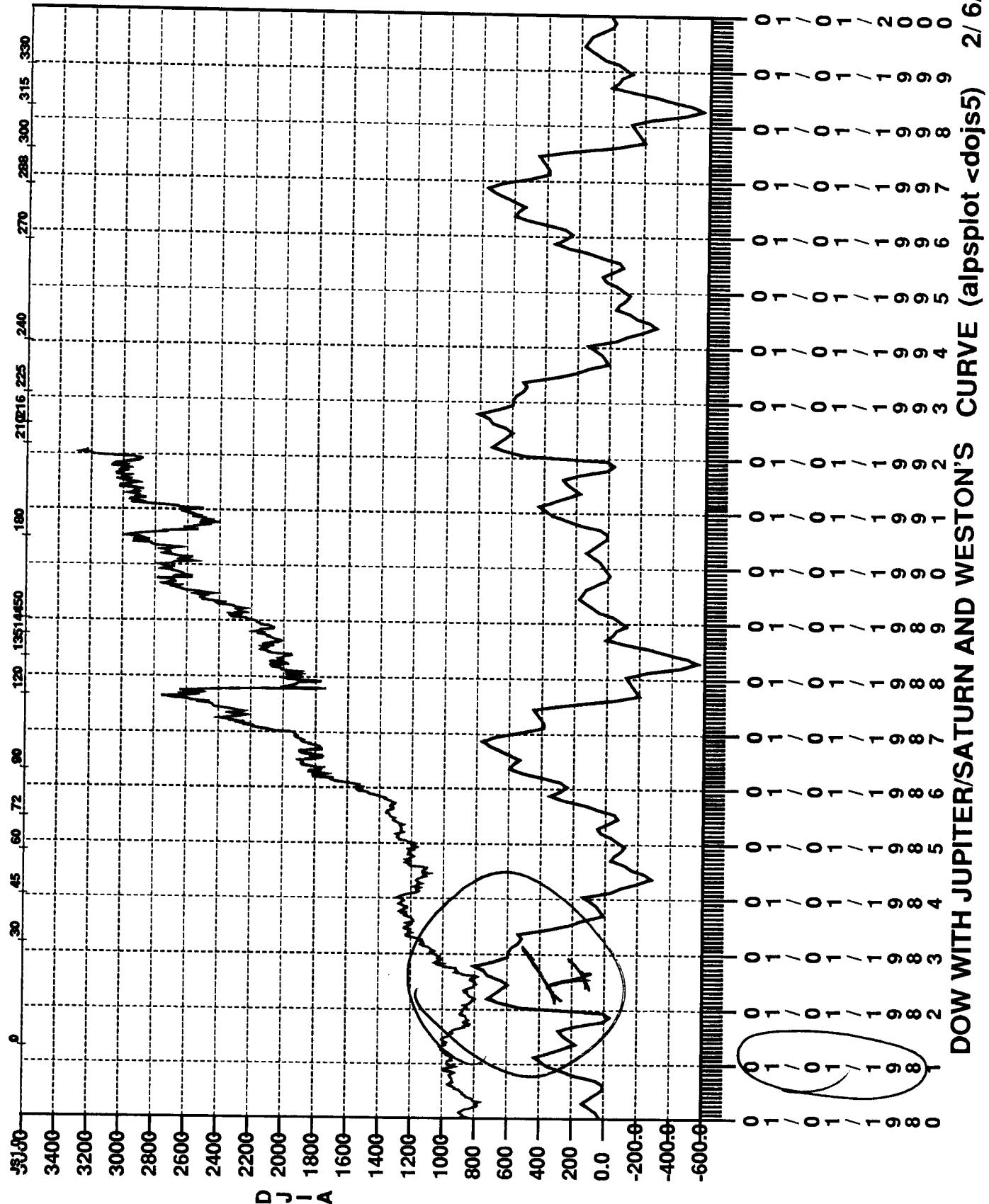
Webster's curve "worked" about 70 percent of the time for the 59 years since publication. But here are periods of inversion that are bothersome. But when the curve is working, it seems to truly forecast the market.

The inversion problem is not new. Edward Dewey, founder for the Foundation for the Study of Cycles, found them in every cycle he studied. But he also found that the cycles always returned to their normal form. *So when Webster's Curve is not inverted, it's a good tool.*

Webster's Snowflake Over Time

Figure 14 shows the first 20 years of Webster's rule of using the 0, 18, 54, 90, 126, and 180 degree points of the JS cycle as turns. One can quickly see the problem with using this geocentrically. Almost all of the points are triple points, as the earth moves around the sun, giving multiple views from which to measure the angle between Jupiter and Saturn. The problem becomes one of which points to use.

It took only one look at using this rule *heliocentrically* to convince me that Webster used it that way. Figures 15-19 show this "modified to heliocentric" snoflake rule. As you look it over, you will see it fits pretty well, with the exception of 1929, 1962, 1974, and 1987. All of these deviations can be traced to multiple simultaneous configurations of the outer planets. Figures 20-24 show the planetary positions at these times as well as for the 1993 Uranus-Neptune conjunction.

Obviously, W. D. Gann watched these outer configurations to be alert for the deviations they might cause in the JS cycle. You are advised to do the same.
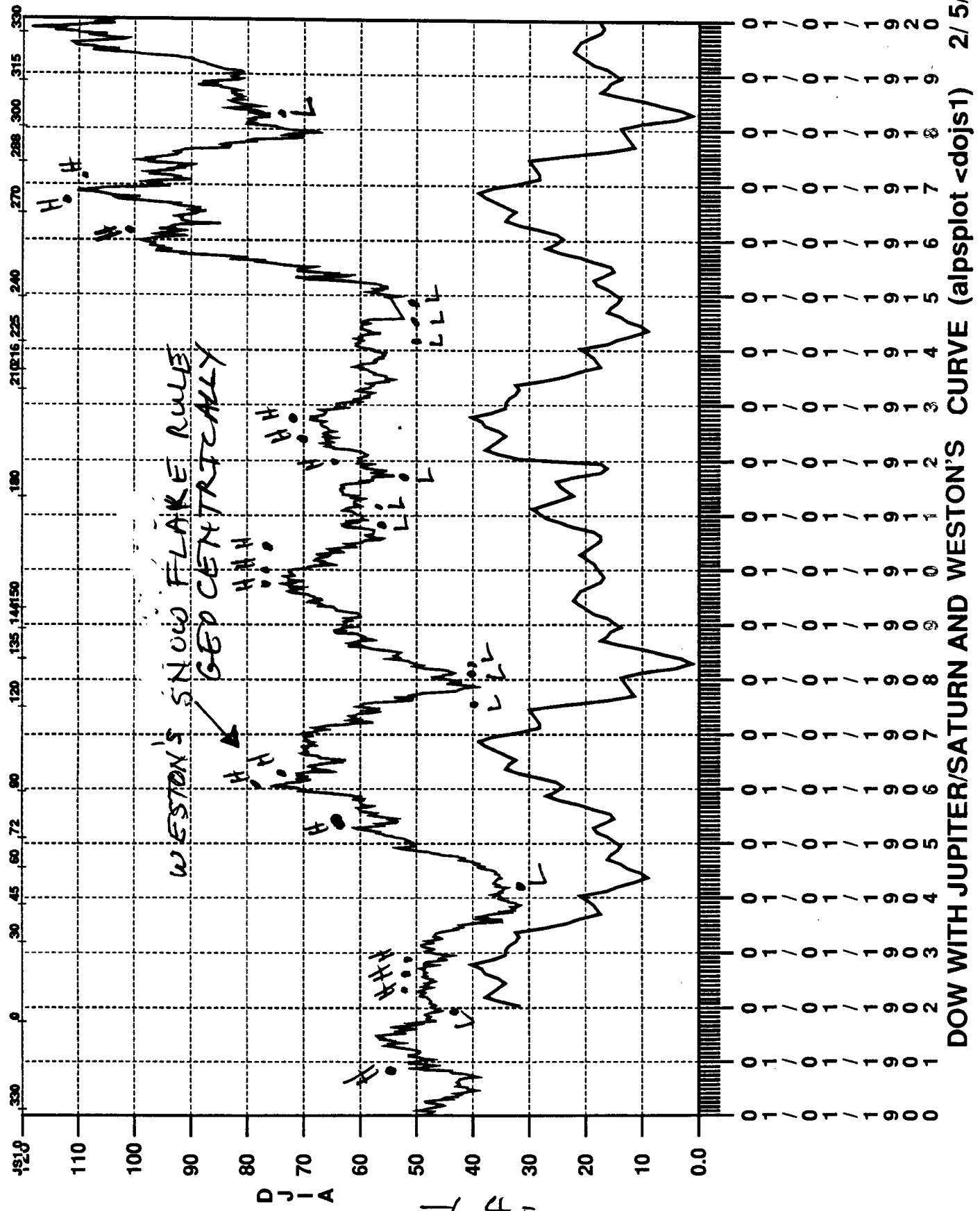
Fig. 14
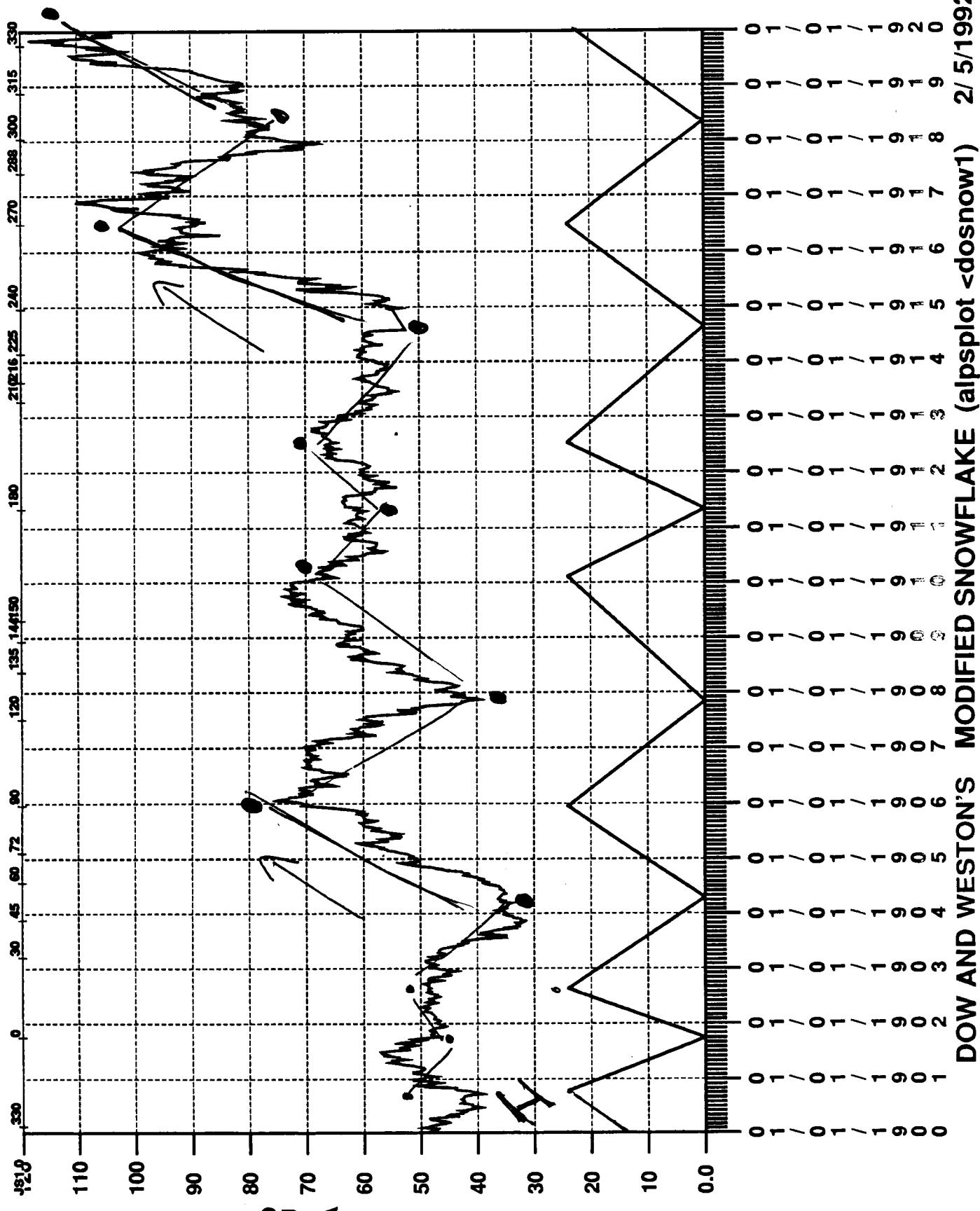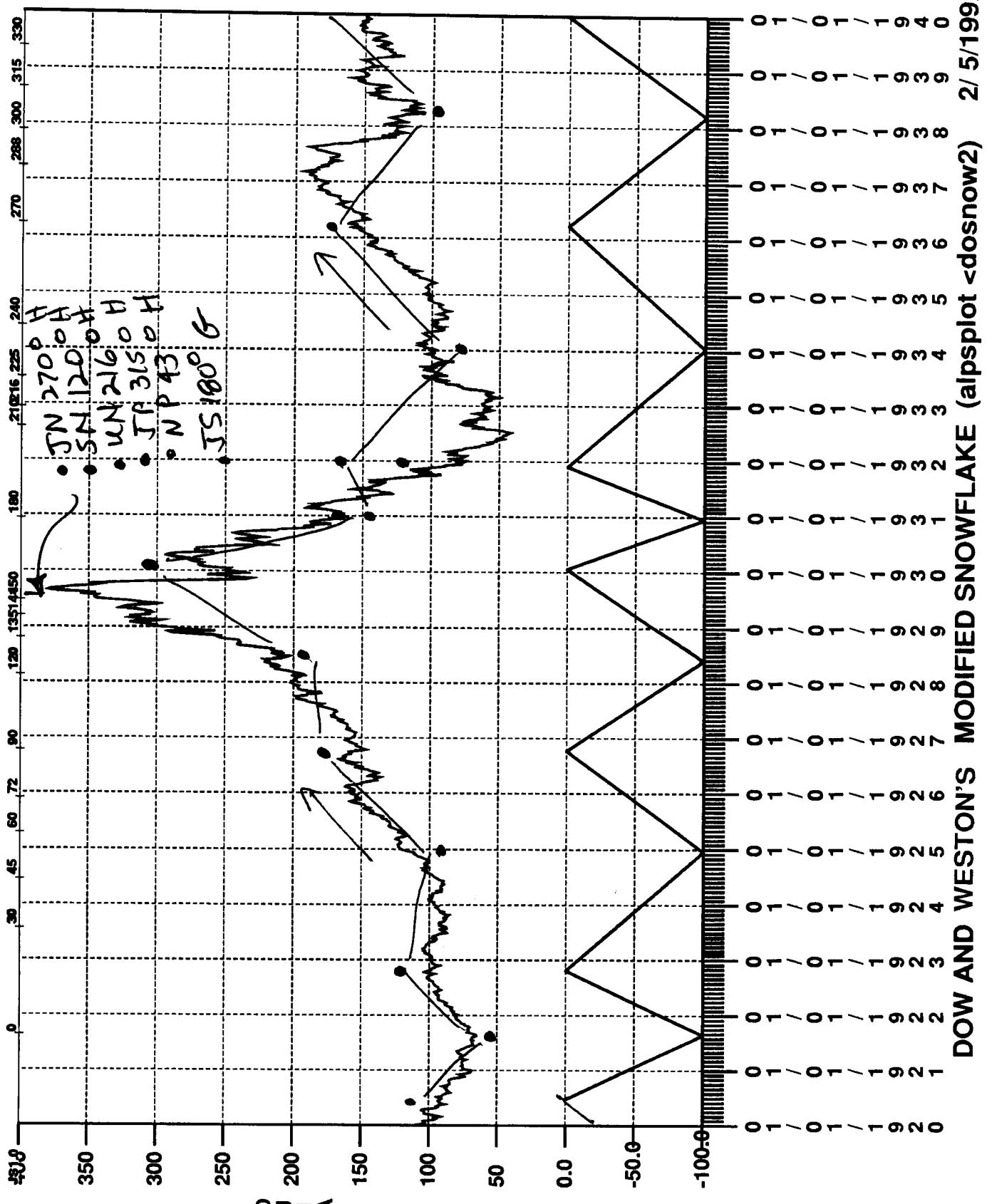
WESTON'S SNOW FLAKE RULE GEOCENTRICALLY

DOW WITH JUPITER/SATURN AND WESTON'S CURVE (alpsplot <dojs1)   2/5/1992

-64-

Fig 15.

DOW AND WESTON'S   MODIFIED SNOWFLAKE (alpsplot <dosnow1)   2/ 5/1992

-65-

Fig 16

JN 270° H
SN 120° H
WN 216° H
JA 315° H
NP 43
JS 180° G

DOW AND WESTON'S MODIFIED SNOWFLAKE (alpsplot <dosnow2)   2/5/1992

- 67 -

DOW AND WESTON'S MODIFIED SNOWFLAKE (alpsplot <dosnow3)   2/ 5/1992

Fig 17

Fig 18

DOW AND WESTON'S   MODIFIED SNOWFLAKE   (alpsplot <dosnow4)   2/ 5/1992

Fig 19

DOW AND WESTON'S MODIFIED SNOWFLAKE (alpsplot <dosnow5)   2/ 5/1992
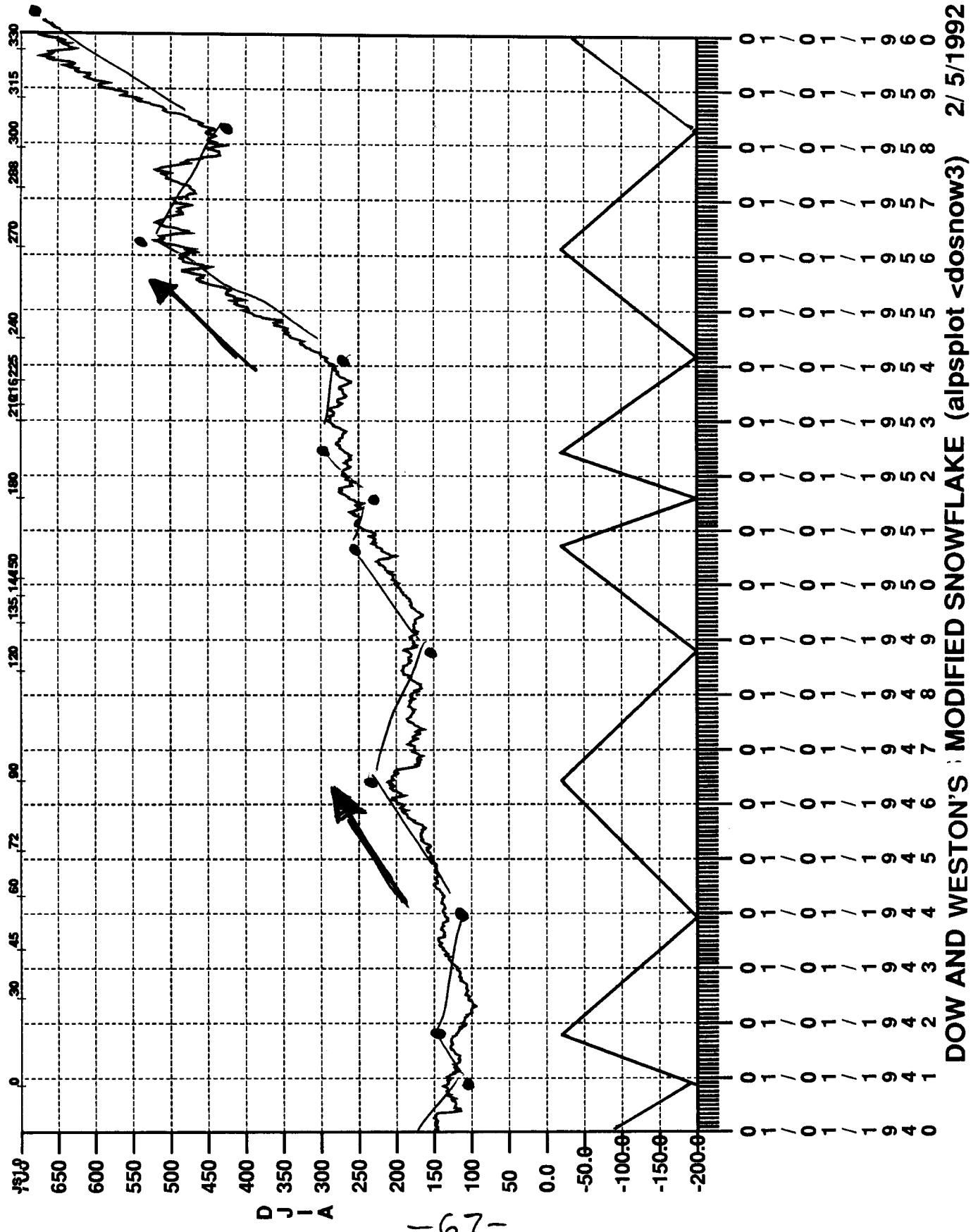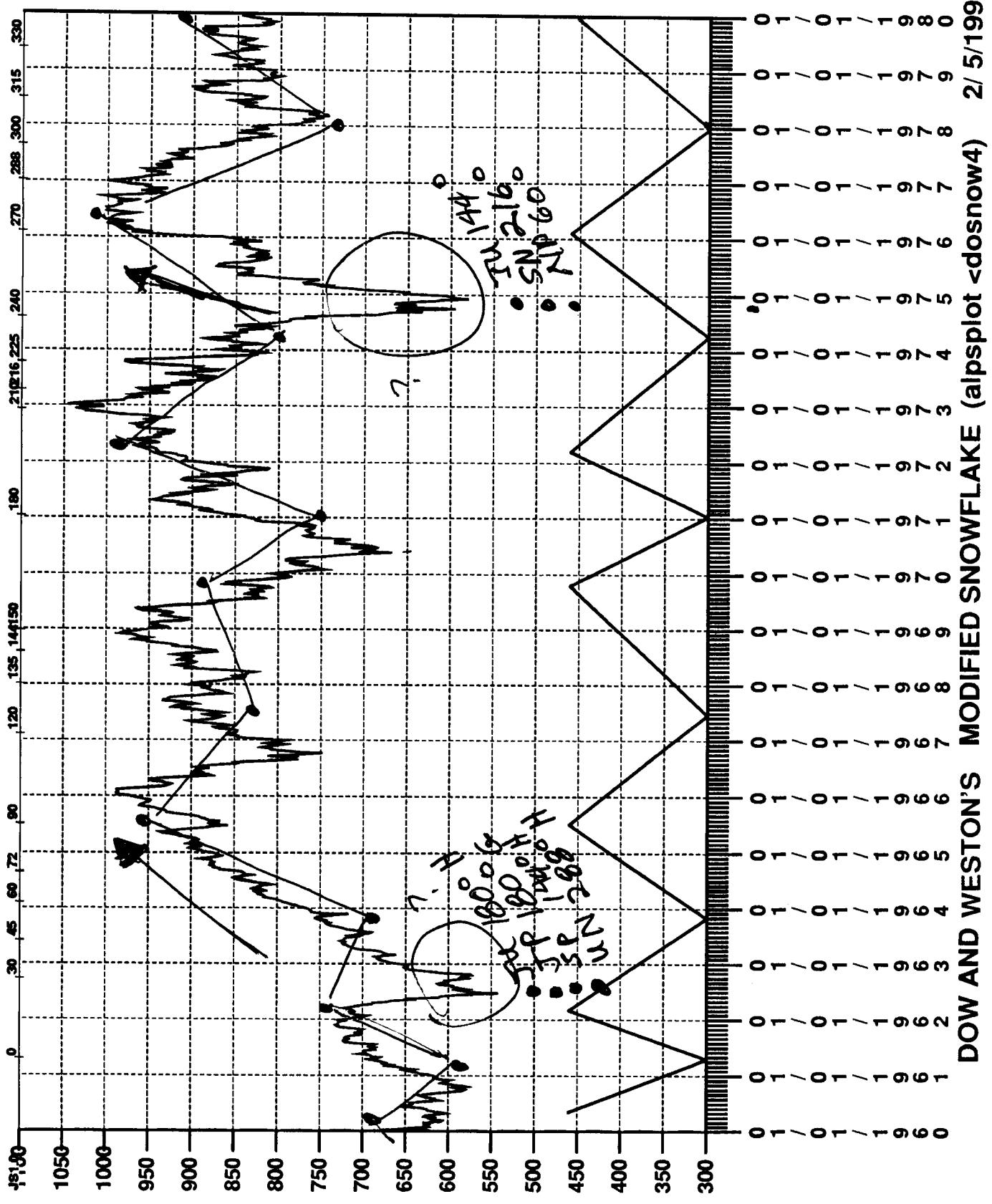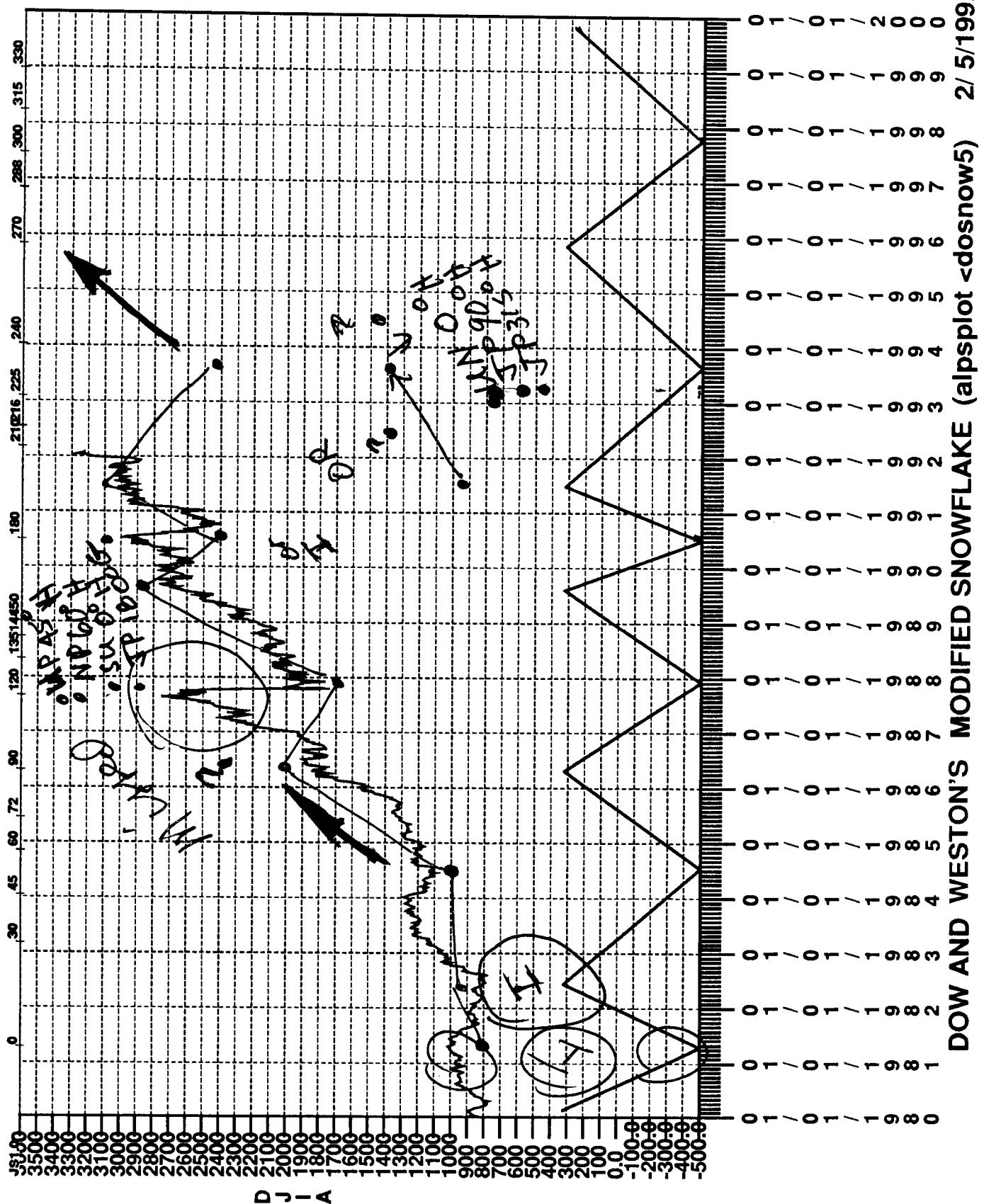
MARKET ASTROPHYSICS EPHEMERIS

HELIOCENTRIC

9   3 1929 17:00 UT
2425858.208 JED

(handwritten: 5/10 ; N □ J 120 ; 216 ; 45)

	M	V	E	R	J	S	U	N	P	T	O	A	B	C	D
M	253														
V	187	66													
E	273	86	340												
R	48	222	136	205											
J	190	3	277	142	63										
S	344	157	71	296	154	269									
U	244	58	332	196	54	260	9								
N	102	276	190	54	272	118	218	151							
P	145	318	232	97	315	161	261	43	08						
T	270	97	183	318	100	254	165	12	55	163					
O	208	21	295	160	18	136	36	254	297	118	45				
A	184	358	272	136	354	159	60	278	321	95	336	69			
B	347	161	75	299	157	356	257	115	158	258	139	163	266		
C	257	71	345	209	67	86	347	205	248	168	49	73	270	356	
D	136	310	224	88	306	207	108	326	9	47	288	312	149	239	117

GEOCENTRIC

(handwritten: JS 180°)

	M	V	H	R	J	S	U	N	P	Y	O	A	B	C	D
M	185														
V	62	123													
H	25	323	160												
R	358	296	332	188											
J	111	49	86	113	74										
S	282	220	257	284	171	263									
U	175	113	150	178	64	253	10								
N	34	332	9	37	283	112	219	151							
P	77	14	51	79	325	155	261	42	109						
Y	338	40	3	335	89	260	153	12	54	163					
O	141	79	115	143	30	141	35	254	296	118	45				
A	117	55	92	119	6	165	58	278	320	95	336	69			
B	280	218	255	282	169	2	255	115	157	258	139	163	266		
C	190	128	165	192	79	92	345	205	247	168	49	73	270	356	
D	69	7	44	71	318	213	106	326	8	47	288	312	149	239	117

Fig 20

MARKET ASTROPHYSICS EPHEMERIS

HELIOCENTRIC

6   1 1962 17:00 UT
2437817.208 JED

JU SP UN
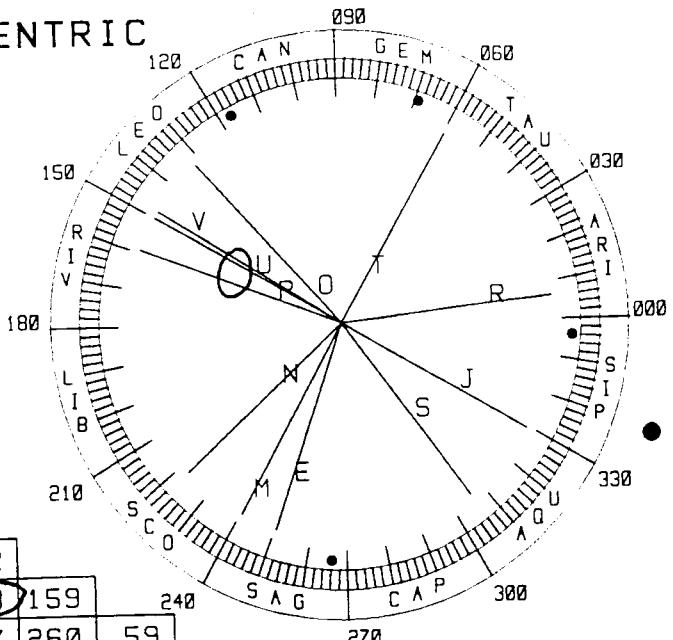
	M	V	E	R	J	S	U	N	P	T	O	A	B	C	D
M	240														
V	**93**	147													
E	350	257	250												
R	234	**142**	244	6											
J	**271**	**178**	281	37	329										
S	294	202	305	**60**	23	306									
U	**91**	**358**	101	**216**	**180**	158	149								
N	18	**286**	**28**	**144**	107	84	**288**	222							
P	81	349	**91**	**207**	170	**147**	351	63	159						
T	**179**	**272**	169	53	**90**	113	**270**	197	260	59					
O	109	16	**119**	234	198	186	342	**270**	**333**	**288**	131				
A	172	79	**182**	**297**	261	**123**	279	207	**270**	351	**63**	69			
B	335	**242**	345	100	64	320	116	**44**	107	154	**226**	163	266		
C	245	152	255	10	334	50	206	**134**	197	64	**136**	**73**	**270**	356	
D	124	**31**	**134**	249	**213**	171	**327**	255	**318**	**303**	15	312	149	**239**	117
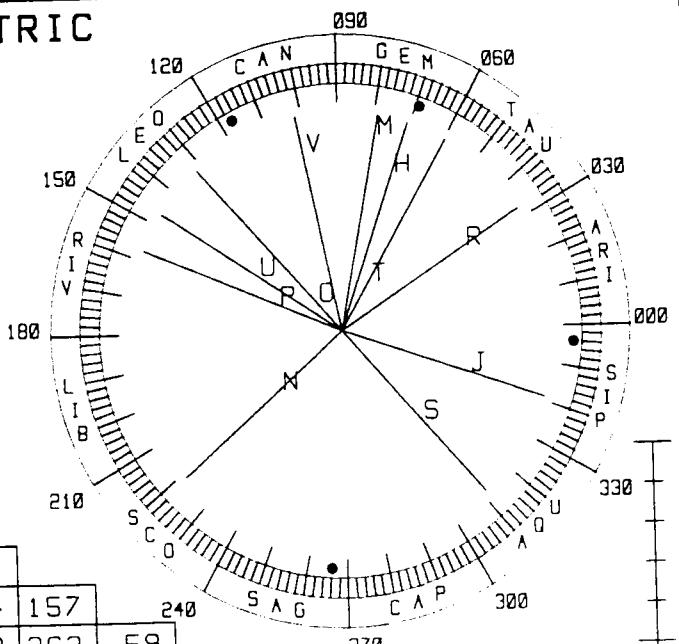
GEOCENTRIC

JP 180

	M	V	H	R	J	S	U	N	P	Y	O	A	B	C	D
M	79														
V	337	101													
H	8	**31**	70												
R	**46**	**69**	38	32											
J	98	**120**	**89**	52	341										
S	128	150	**119**	81	**30**	311									
U	292	**315**	284	246	194	165	146								
N	**218**	**240**	**209**	171	**120**	**90**	**285**	221							
P	281	304	273	235	184	154	349	64	157						
Y	341	318	349	**27**	78	108	273	198	262	59					
O	307	**330**	**299**	261	**209**	181	345	**271**	334	**288**	131				
A	10	33	**2**	324	**272**	118	282	**208**	**271**	351	63	69			
B	173	196	165	127	75	**315**	119	**45**	108	154	**226**	163	266		
C	83	106	75	37	345	**45**	**209**	**135**	198	64	**136**	**73**	**270**	356	
D	322	345	**314**	276	**224**	166	**330**	256	319	303	15	**312**	149	**239**	117

Fig 21

MARKET ASTROPHYSICS EPHEMERIS

HELIOCENTRIC

12 1 1974 17:00 UT
2442383.208 JED

Ju 144° SN 216° NP 60°

	M	V	E	R	J	S	U	N	P	T	O	A	B	C	D
M	216														
V	312	263													
E	147	195	69												
R	352	40	205	223											
J	225	273	78	233	350										
S	112	160	325	120	247	104									
U	8	55	220	15	142	255	208								
N	327	14	180	334	101	215	319	249							
P	29	77	242	37	164	277	21	62	187						
T	240	193	27	232	106	352	248	207	269	96					
O	326	14	179	334	101	146	42	1	63	206	250				
A	147	195	0	155	282	325	220	180	242	27	181	69			
B	310	358	163	318	85	162	57	17	79	190	344	163	266		
C	220	268	73	228	355	252	147	107	169	100	254	73	270	356	
D	99	147	312	107	234	13	268	228	290	339	133	312	149	239	117
	M	V	E	R	J	S	U	N	P	T	O	A	B	C	D

GEOCENTRIC

JN 90° NP 61°

|	M	V	H	R	J	S	U	N	P	Y	O	A	B	C	D
M	239														
V	344	255													
H	350	6	249												
R	6	22	16	233											
J	260	276	270	254	339										
S	131	147	141	126	231	108									
U	29	45	39	23	129	257	210								
N	350	6	360	344	90	219	321	249							
P	50	67	60	45	151	279	22	61	188						
Y	217	201	207	223	117	348	246	207	268	96					
O	349	5	359	343	89	142	40	1	61	206	250				
A	170	186	180	165	270	321	218	180	240	27	181	69			
B	333	349	343	328	73	158	55	17	77	190	344	163	266		
C	243	259	253	238	343	248	145	107	167	100	254	73	270	356	
D	122	138	132	117	222	9	266	228	288	339	133	312	149	239	117
	M	V	H	R	J	S	U	N	P	Y	O	A	B	C	D

Fig 22

MARKET ASTROPHYSICS EPHEMERIS

HELIOCENTRIC

8 25 1987 17:00 UT
2447033.208 JED

UP.AS
NP 60
SU 0

	M	V	E	R	J	S	U	N	P	T	O	A	B	C	D
M	172														
V	19	153													
E	200	182	331												
R	20	2	180	151											
J	152	134	312	132	19										
S	272	253	72	252	120	260									
U	267	248	66	246	114	355	265								
N	255	237	55	235	103	343	349	276							
P	313	294	113	292	160	41	46	58	219						
T	353	12	193	14	146	265	260	248	306	165					
O	168	150	328	148	16	104	98	87	145	161	3				
A	103	85	263	83	311	169	163	152	210	96	295	69			
B	266	248	66	246	114	6	0	349	47	259	98	163	266		
C	176	158	336	156	24	96	90	79	137	169	8	73	270	356	
D	55	37	215	35	263	217	211	200	258	48	247	312	149	239	117
	M	V	E	R	J	S	U	N	P	T	O	A	B	C	D

GEOCENTRIC

JP 180°

	M	V	H	R	J	S	U	N	P	Y	O	A	B	C	D
M	157														
V	5	152													
H	5	1	151												
R	6	1	0	151											
J	128	123	122	122	29										
S	263	258	257	257	135	254									
U	255	250	249	249	127	352	262								
N	242	237	237	236	114	339	347	275							
P	300	295	294	294	172	37	45	58	217						
Y	8	13	13	14	136	271	263	250	308	165					
O	153	149	148	148	26	109	101	89	146	161	3				
A	88	84	83	83	321	174	166	154	211	96	295	69			
B	251	247	246	246	124	11	3	351	48	259	98	163	266		
C	161	157	156	156	34	101	93	81	138	169	8	73	270	356	
D	40	36	35	35	273	222	214	202	259	48	247	312	149	239	117
	M	V	H	R	J	S	U	N	P	Y	O	A	B	C	D

Fig 23

MARKET ASTROPHYSICS EPHEMERIS

HELIOCENTRIC

4 19 1993 17:00 UT
2449097.208 JED

	M	V	E	R	J	S	U	N	P	T	O	A	B	C	D
M	297														
V	77	221													
E	88	11	209												
R	144	68	56	153											
J	106	30	18	322	191										
S	335	258	247	190	228	323									
U	8	292	280	224	262	34	289								
N	8	292	280	224	262	34	360	289							
P	64	347	336	279	317	89	55	55	233						
T	67	143	155	211	173	41	75	75	130	4					
O	43	326	315	259	297	292	325	325	21	110	254				
A	229	152	141	84	122	106	140	140	195	295	186	69			
B	32	315	304	247	285	303	337	337	32	98	349	163	266		
C	302	225	214	157	195	33	67	67	122	8	259	73	270	356	
D	181	104	93	36	74	154	188	188	243	247	138	312	149	239	117
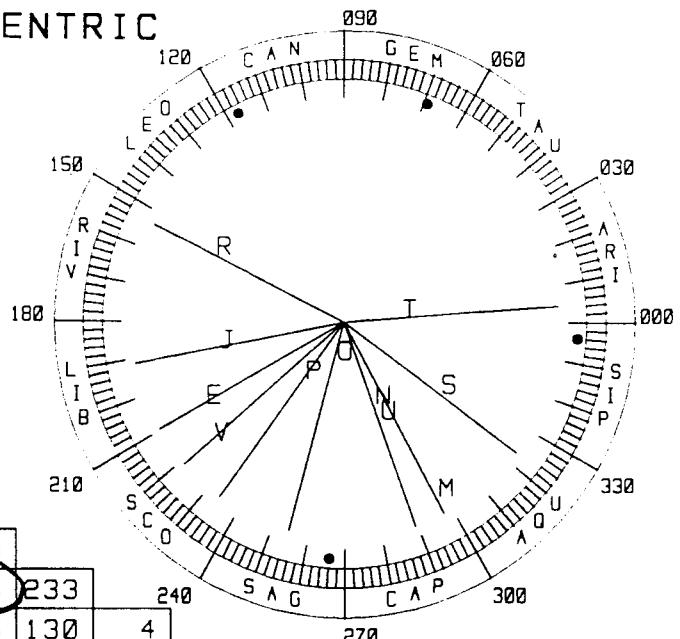
GEOCENTRIC

FULL MOON

|	M	V	H	R	J	S	U	N	P	Y	O	A	B	C	D
M	5														
V	2	3													
H	336	334	29												
R	250	248	273	116											
J	178	177	202	289	187										
S	37	36	61	148	219	328									
U	74	72	97	184	255	36	292								
N	75	73	98	185	256	37	1	291							
P	131	129	155	241	313	94	57	56	234						
Y	359	0	335	248	177	36	72	73	130	4					
O	111	109	135	222	293	286	322	324	20	110	254				
A	297	295	321	47	118	101	137	138	194	295	186	69			
B	100	98	124	210	281	298	334	335	31	98	349	163	266		
C	10	8	34	120	191	28	64	65	121	8	259	73	270	356	
D	249	247	273	359	70	149	185	186	242	247	138	312	149	239	117
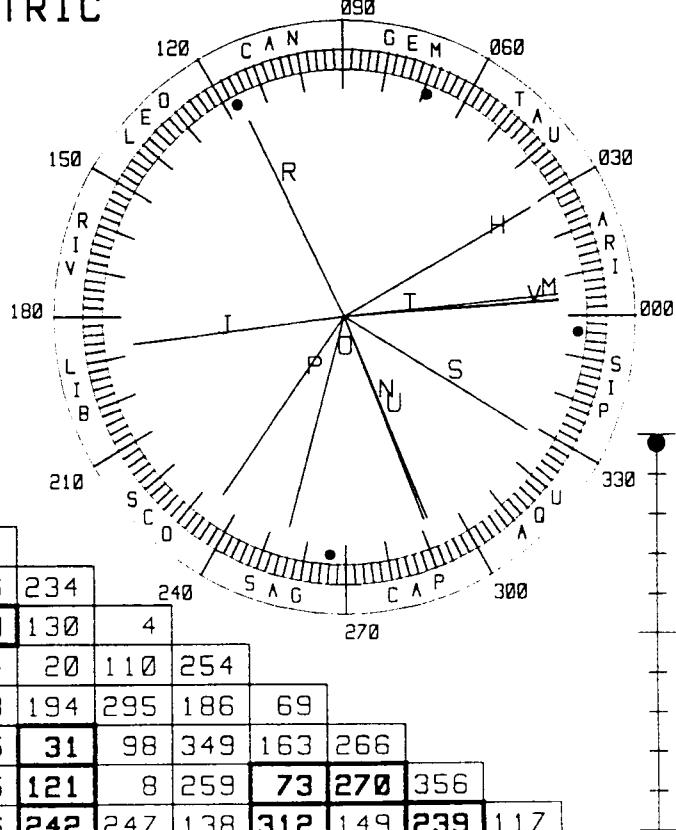
Fig 24

A Fresh Look With Modern Technology

After *eyeballing* these correlations, I decided to try one of my inventions on the JS cycle. The Zero Delay filter is a modern digital filter with a difference. All other digital filters have a built in delay, usually equal to one half the span. For example, a filter to track 100 day swings gives an answer that is 50 days out of date. The ZD filter is always on time.

To set up a ZD filter for the JS cycle, it is only necessary to set the ZD swing value to 720, about one tenth of a JS cycle. This filter then takes in the price time data series, and puts out data for the cycle dominated by nominal 720 day swings. One beauty of the ZD filter set for 720 days is that it will track swings between 560 and 2160 days effectively. So it can follow natural cycles well. *Most Importantly, the ZD filter TELLS IT LIKE IT IS.* It knows nothing about planets. It just uses prices. And it computes the cycle that IS there.

Figures 25-29 show the 720 day ZD filtered cycle, and the modified Webster snowflake. Study those figures carefully, especially the last one.

Fig 5

400
350
300
250
200
150
100
50
0.0
-50.0
-100.0

D J I A

ZERO DEGREE FOLLOWS
ZERO FILTER VERSION

Fig 26

2/5/1992

DJIA WITH 780 DAY ZERO DELAY FILTERED CYCLE F

Fig 27

DJIA WITH 720 DAY ZERO DELAY FILTERED CYCLE

2/5/1992

FD Filter Picks up
Inversions

FIG 2B

Zero Delay Filter caught Turns

Zero Delay Filter Early and late

ZD720

DJIA WITH 720 DAY ZERO DELAY FILTERED CYCLE
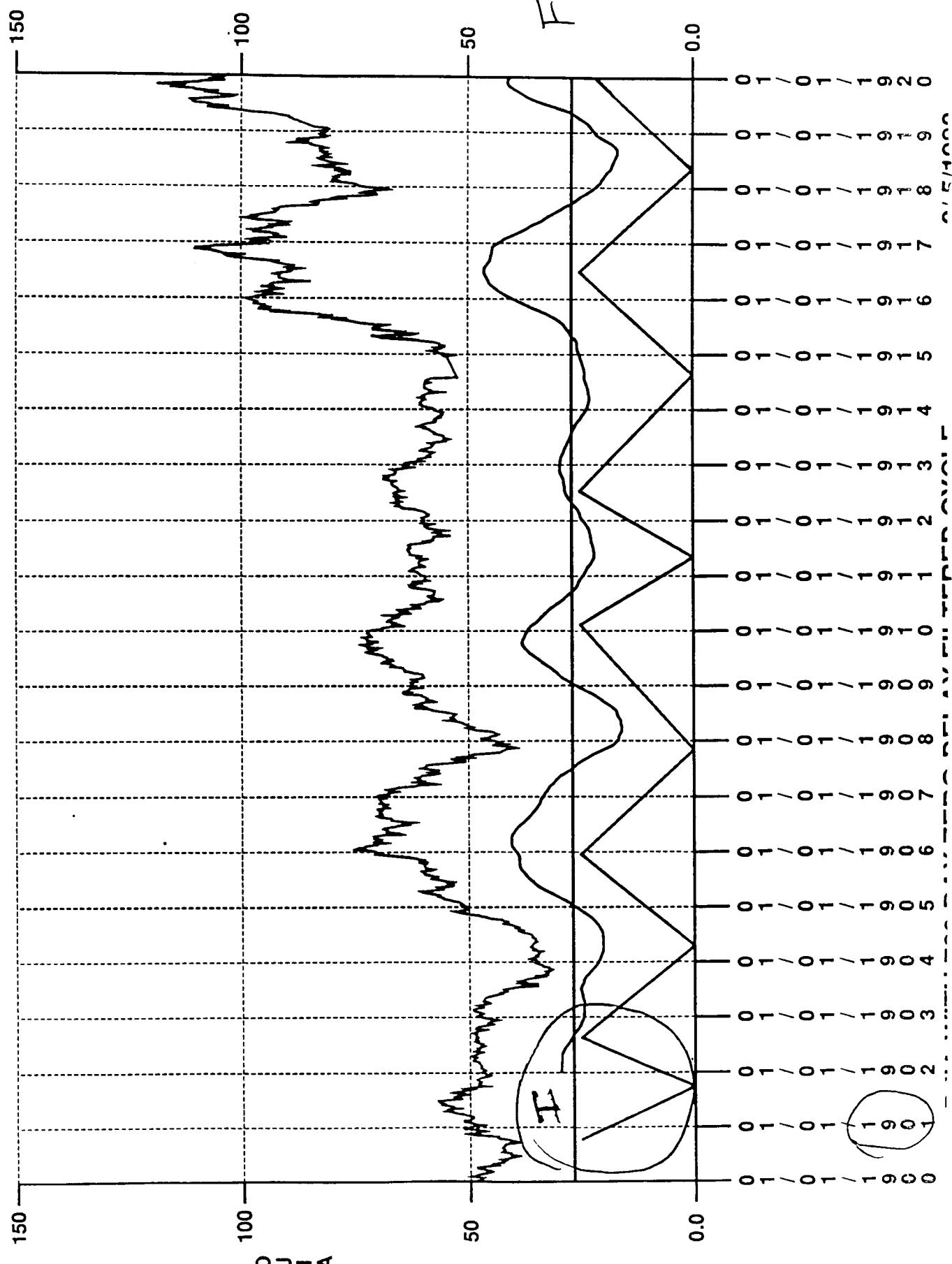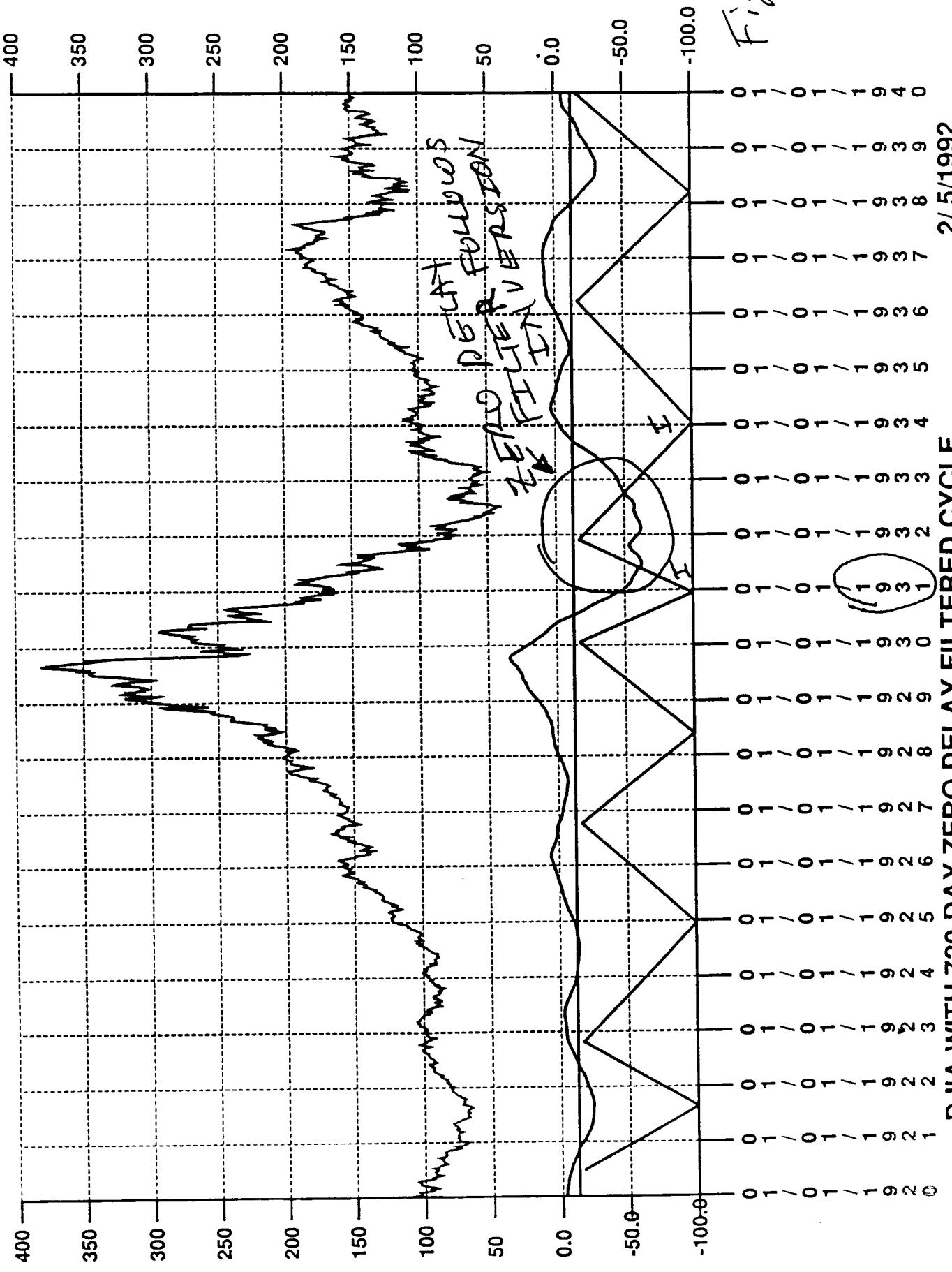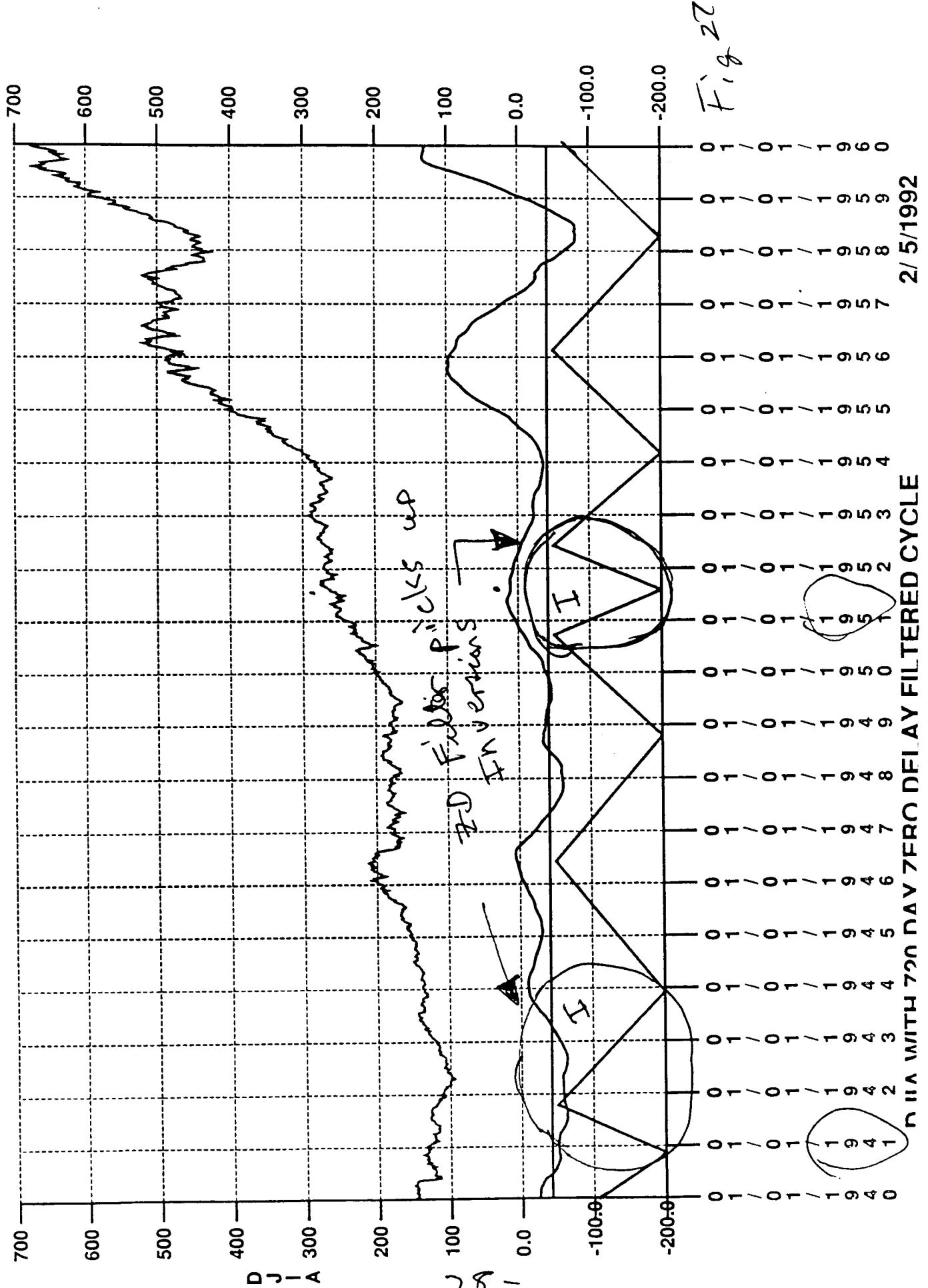
2/5/1992

ZERO DELAY FILTERED CYCLE

-79-

DJIA WITH 720 DAY ZERO DELAY FILTERED CYCLE

2/ 5/1992

Fig 29
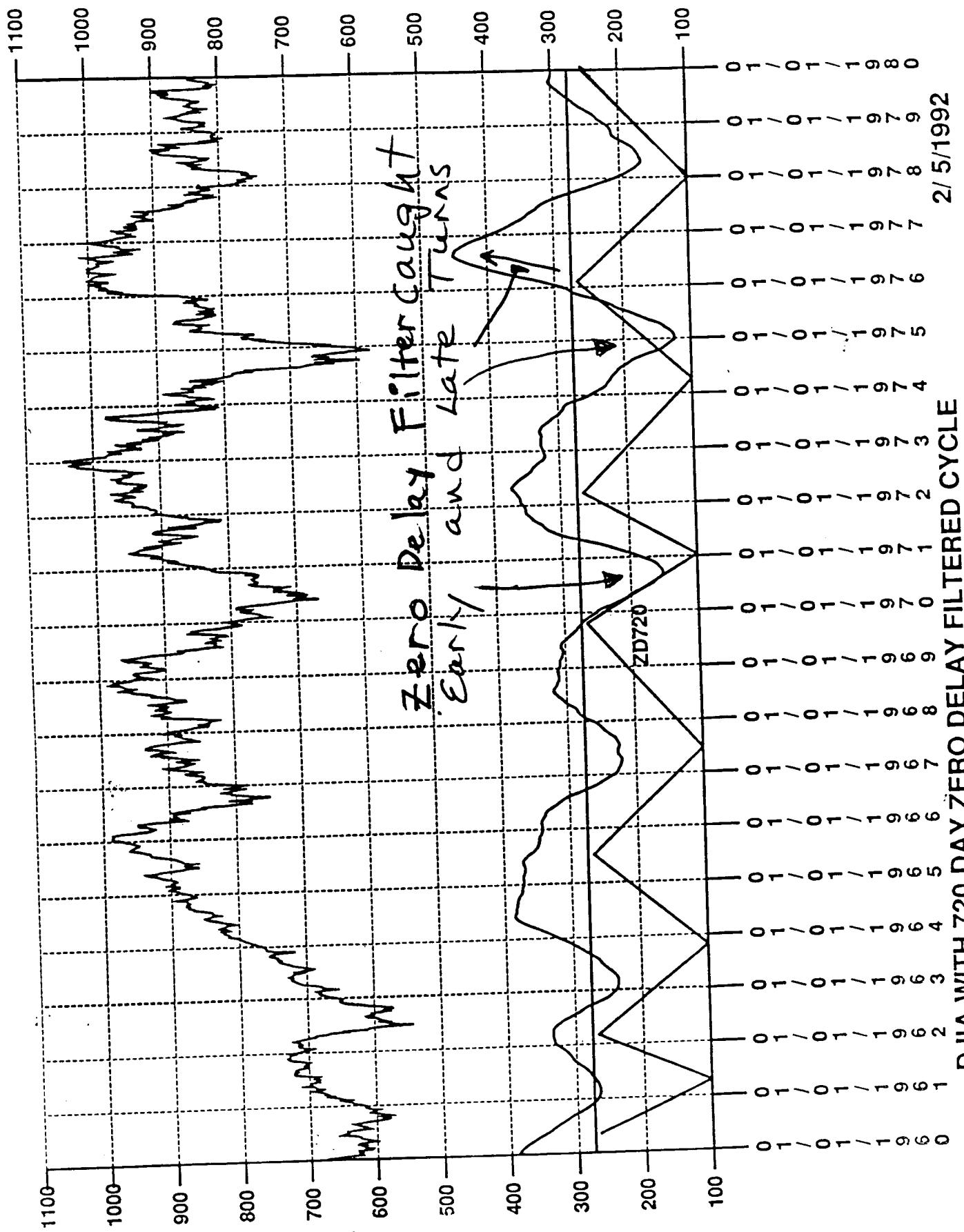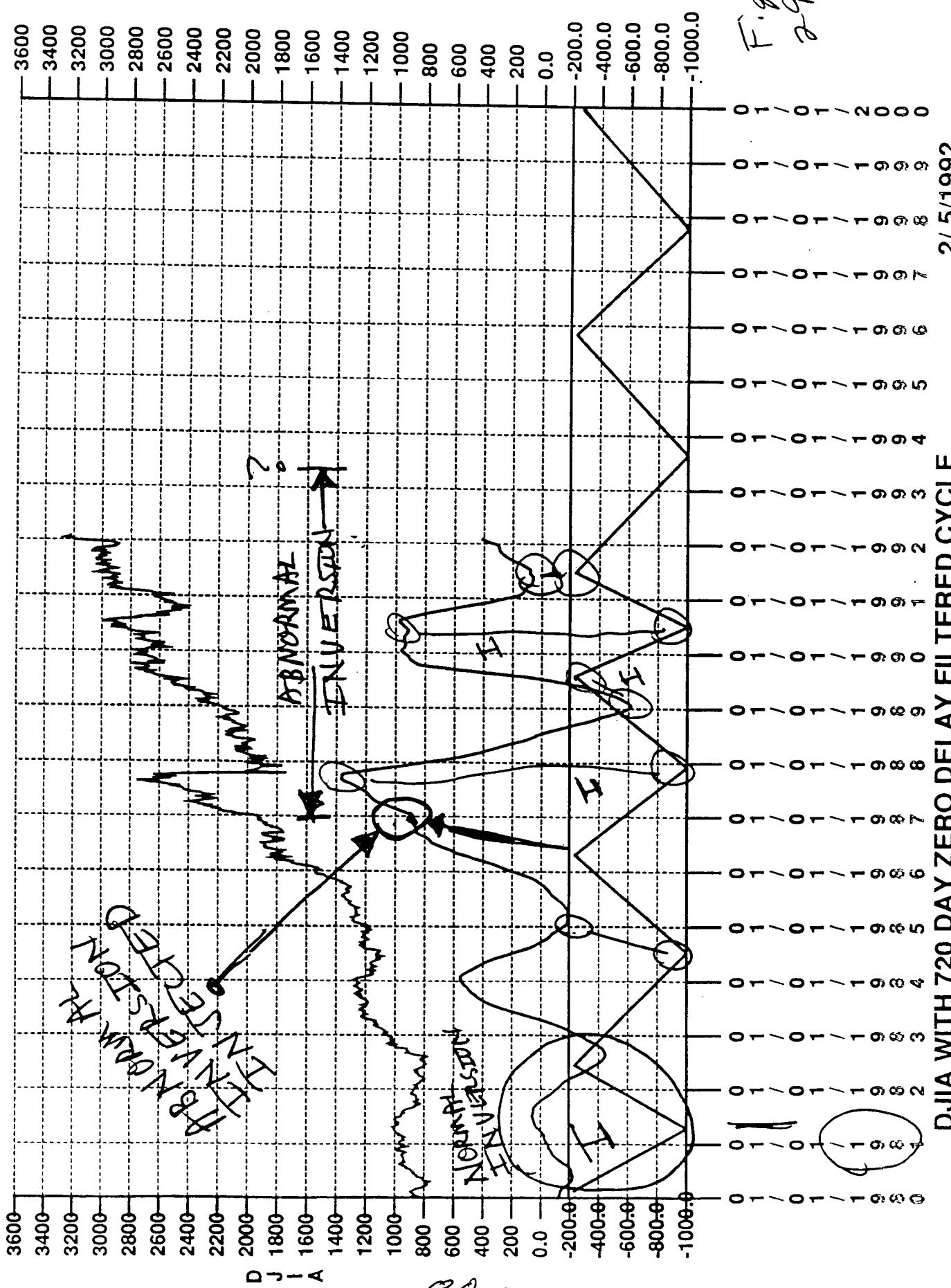
Obviously, the ZD filter makes it much clearer where the Weston snowflake inverts. Most of these are single cycle inversions. *__But what happened in 1987?__* The ZD cycle was turning down mid 1986, but was suddenly inverted, and is still inverted. What cause the inversion, and how long will it last?

To attempt to answer these questions, we needed to do more work. Outer planet configurations were an obvious suspect. A quick check of the ephemeris revealed that Jupiter made three successive squares (90 degree angles) with Saturn, Uranus, and Neptune on 4/24/86, 10/25/86, and 3/28/87, respectively. See Figure 30. Apparently, that was a bit too much for the JS cycle, and it inverted.

And will it stay inverted until 1993?

To try to answer that question, I looked again at the Weston curve in this time period. I noticed it matched reality much better if it was advanced one year. This is not unreasonable, if one considers Prof. Weston's thesis that there were 16 Venus cycles in one-half a JS cycle. Actually, there are 16.14 , or .14 Venus cycles too many. So in 8 repetitions, there will be 1.12 extra Venus cycles, or nearly a year. Figure 31 shows this advanced cycle. It indicates a down 1992, with an up 1993, for an overall up into 1993.

MARKET ASTROPHYSICS EPHEMERIS

HELIOCENTRIC

1 17 1987 17:00 UT
2446813.208 JED

	M	V	E	R	J	S	U	N	P	T	O	A	B	C	D
M	307														
V	147	161													
E	191	44	117												
R	262	116	72	45											
J	308	162	117	46	359										
S	54	268	224	152	106	253									
U	45	258	214	142	97	351	262								
N	32	246	201	130	84	338	347	275							
P	90	303	259	188	142	36	45	58	217						
T	198	345	29	100	146	252	243	230	288	145					
O	292	146	101	30	344	122	113	100	158	130	15				
A	239	92	48	336	291	175	166	153	211	77	307	69			
B	42	255	211	139	94	12	3	350	48	240	110	163	266		
C	312	165	121	49	4	102	93	80	138	150	20	73	270	356	
D	191	44	0	288	243	223	214	201	259	29	259	312	149	239	117
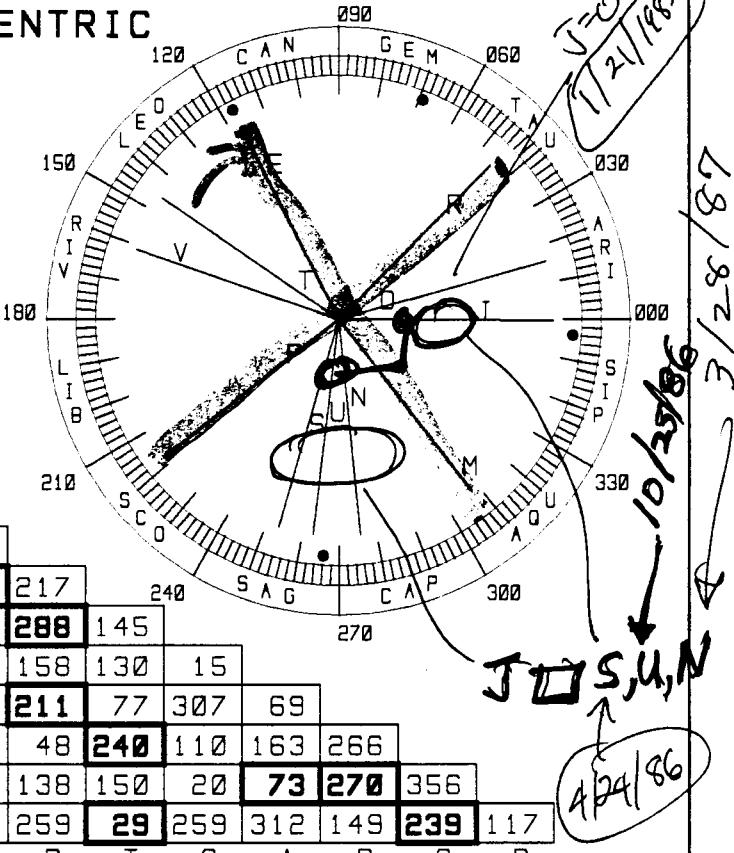
GEOCENTRIC

	M	V	H	R	J	S	U	N	P	Y	O	A	B	C	D
M	300														
V	50	250													
H	3	313	297												
R	294	244	291	6											
J	310	260	307	16	350										
S	43	353	40	109	93	257									
U	36	346	32	102	86	353	264								
N	24	334	21	90	74	341	348	276							
P	81	30	77	147	131	37	45	57	219						
Y	205	256	209	139	155	249	241	229	286	145					
O	285	234	281	351	335	118	111	99	156	130	15				
A	231	181	228	297	281	172	164	153	209	77	307	69			
B	34	344	31	100	84	9	1	350	46	240	110	163	266		
C	304	254	301	10	354	99	91	80	136	150	20	73	270	356	
D	183	133	180	249	233	220	212	201	257	29	259	312	149	239	117
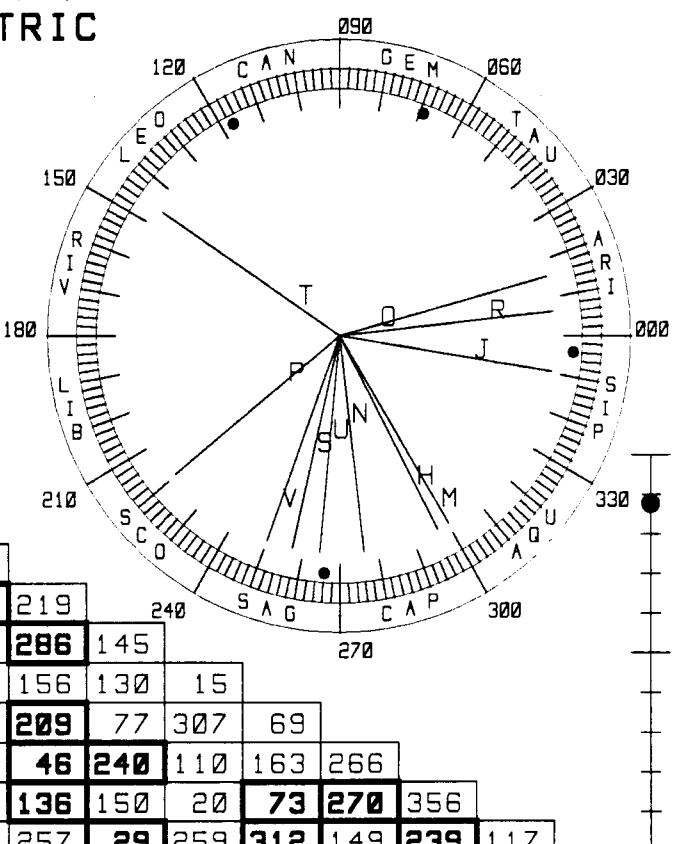
Fig 30

DJIA, WEBSTER'S CURVE ADVANCED ONE YEAR, AND 720 DAY ZD CYCLE

D
J — D
A
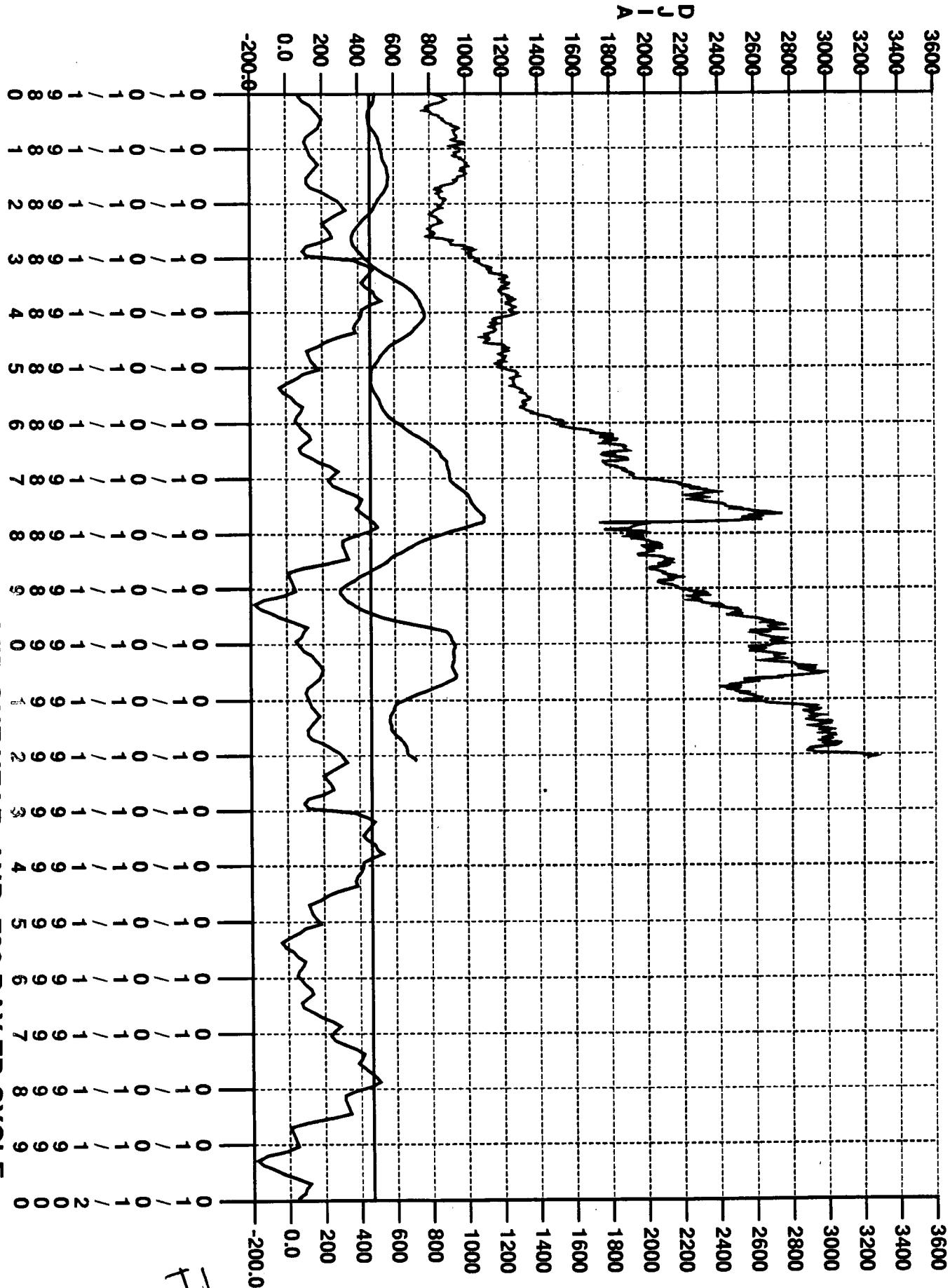
Fig 31

The next attack I made on the problem was to use my software to generate what I call the TRUE CHANNEL. Basically, this software automatically determines the Gann "Tunnel Thru the Air" that the stock or commodity is moving in. It finds the channel within which the move's energy is contained. Figure 32 shows this channel.

DJIA, A THEORETICAL CYCLE, AND 720 DAY ZERO DELAY CYCLE

Fig 32

2/6/1992
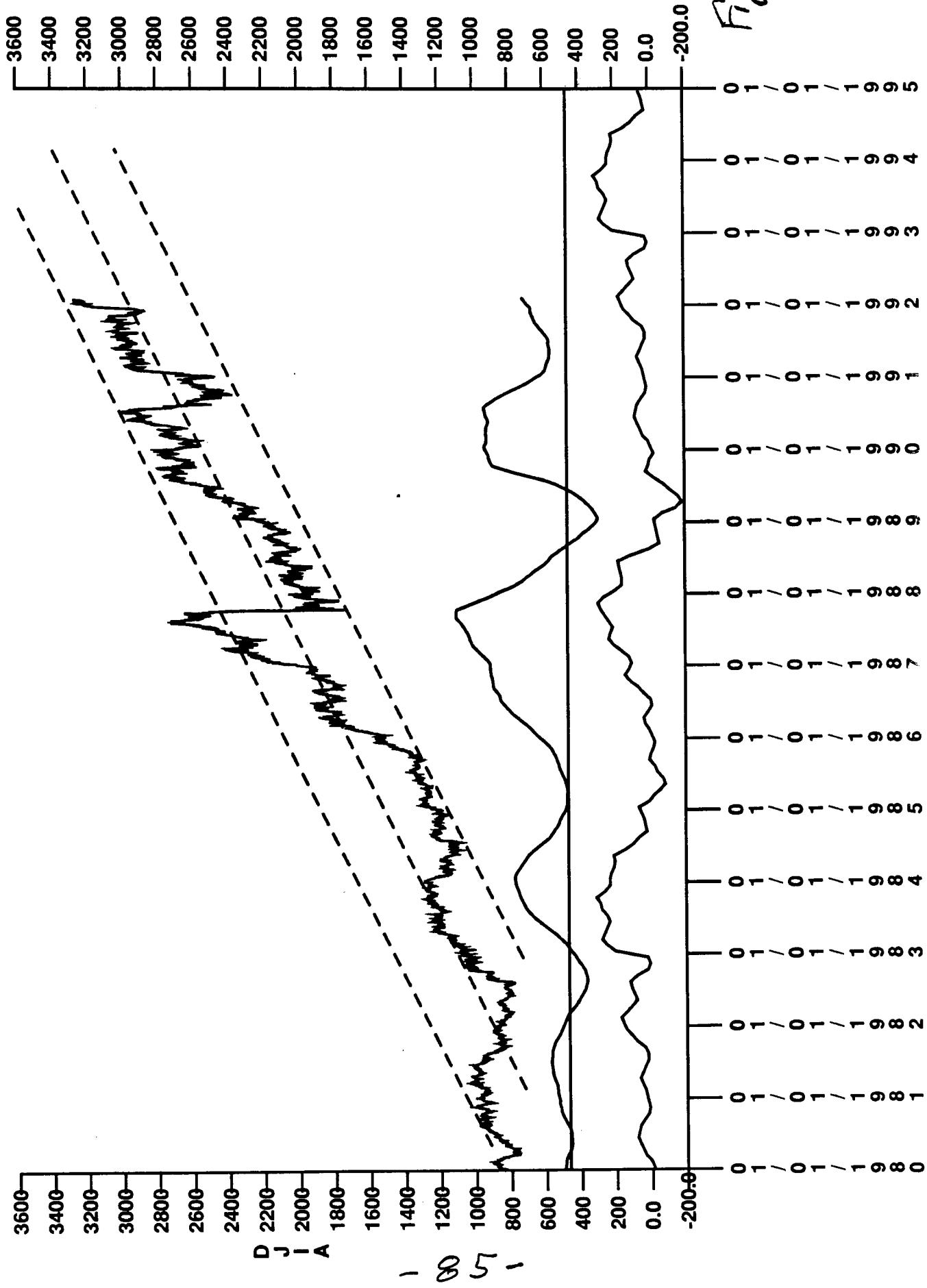
Finally, Figure 33 shows my final analysis. I have added a possible Elliott wave count. And I have used proprietary techniques (taught in my MAP graduate course) to isolate the planetary cycle controlling the channel. This cycle by its nature must draw energy from all the other planetary cycles, including JS. If they were a chorus, this one cycle would be the lead singer.

Turning points occur in that cycle at the zero and 180 degree points. Whole cycles run from 0 to 0 in their swings. Half cycles run from 0 to 180, or 180 to 0. This tends to support a continuation of the overall trend up into 1993, but with a down turn from 2/12/92 until 11/17/92.

DJIA, A THEORETICAL CYCLE, AND 720 DAY ZERO DELAY CYCLE

Fig 33

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2/6/1992

- 88 -
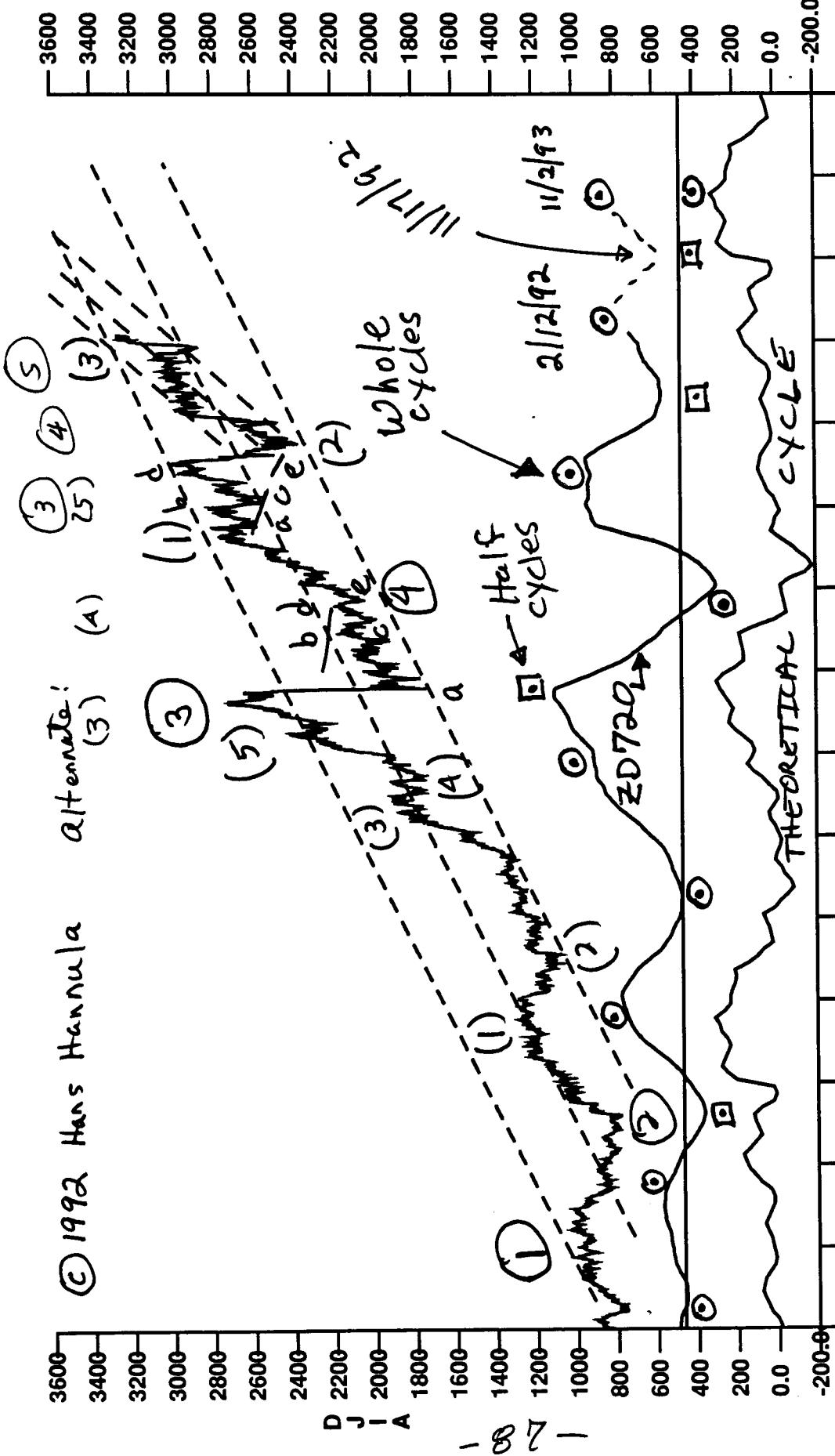
Summary

That's the tour - from Gann, to Weston, to Hannula. It should give you a pretty clear idea of why Bill Gann locked up Weston's paper. It was a pretty good roadmap for the market. It probably beat most market forecasters. It certainly helped Bill Gann make his outstanding annual forecasts.

Weston's paper also contained a very scientific means to forecast cycles. This provided Gann another way to work the problem, to add to and confirm his astrology and geometric approaches. So when it all fit together, he could trade with lower risk.

I also follow a multiple technique approach, as you have seen. However, the ZD filter gives me one major advantage. While all the other analysis tells me what **COULD** happen, the ZD filter tells me what **IS** happening. For example, the market **COULD** turn down 2/12/92. The ZD filter will tell me if it **IS** turning down. In a way, I view it to be much like the "thought receiver" that Robert used in _Tunnel Thru the Air_.

I promised you a unique journey. I hope you found it not only unique, but fascinating, and enjoyable. I hope you now see that the only real secret is no secret at all - the planets really do move the markets. All careful researchers will discover what others have discovered over the ages - _there is truly nothing new under the sun. One just has to step out of the shadow of ignorance._

Happy Trading,

Hans

P. S.

A Gann riddle:

Why is this the only document you've ever read that called Gann Bill? Why did Gann insist on calling himself W. D. Gann? Hint: What cycle was he encoding? If you think you know, call me at 303 452 5566.